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Third Quarterly Magazine 2013  
Volume 03/2013

## CANTO 2013 "Towards a SMART Broadband Caribbean Community"



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## Mission

To facilitate the development of ICT solutions for the benefit of members and other stakeholders in the Caribbean region.

## Vision

To be the leading authority in shaping information and communication in the Caribbean.

## 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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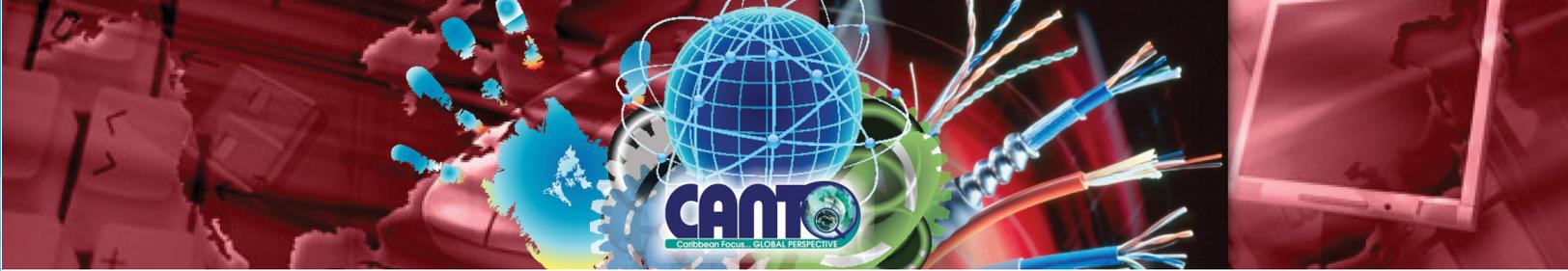
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# Towards a SMART Broadband Caribbean Community

## Editorial (English)

The 29th Annual Conference and Trade Exhibition was held in Aruba 14th to 19th July. The event was co-hosted by SETAR. Over 450 delegates participated. The delegates represented a diverse mix of industry stakeholders from across the globe; telecommunication network operators, service providers, industry professional, academia, regulators, policy makers and regional government ministers with responsibility for ICT development in their respective countries.

As usual, the conference provided a unique opportunity for the juxtaposition of the perspectives of the key constituents. Government representatives spoke to the issues from the standpoint of ensuring that sector policies promote ICT development, in line with overall national development goals. This year, government ministers from ten Caribbean countries shared their perspectives on broadband development in their respective countries. No surprises, governments see continued broadband development in network infrastructure, (especially in under-served areas), more affordable prices, investments in innovative products and services, awareness programs and skills development, as necessary to drive broadband development to the next level.

Several ministers identified financing of broadband development as a key challenge. Making more efficient use of available funds in existing universal service funds to support broadband development is one solution. Funds may also be sourced through multi-lateral agencies; the World Bank's Caribbean Regional Communications Infrastructure Program

(CARCIP) project was offered as an example. Policies that support innovation and entrepreneurship are needed to enhance the productive use of broadband. In this regard, opportunities exist to nurture and develop local and regional content industries. A number of measures were discussed. Making more local and regional content available on line, aligning tertiary education curriculum to support entrepreneurship, extending broadband connections to all schools, using the technology to deliver the school curriculum, as well as implementing more e-government applications, were just some of the measures explored.

Network operators and service providers spoke to the challenges in making the business case for future investments. Lack of regulatory certainty, depressed or at best sluggish economic growth, the need to level the playing field with respect to over-the-top service providers, and the need for economy wide policies to drive demand for ICT services, were the highlights of the discussion.

The question of tax incentives, such as the reduction of duties on computer and other access devices, smart phones for example, was discussed at length. Government representatives explained that in some countries such tax breaks are already in place. In other countries fiscal constraints do not allow the flexibility to pursue such policies. Other felt studies were needed to determine the correlation between reduced taxation on access devices and the productive use of broadband services, in order to justify such policies.



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The conversation was enriched with the presence of the global market players, and subject experts with international experience sharing their diverse points of view. Presentations and discussions covered network development trends, particularly in the area of mobile technology. Given the high level of mobile penetration throughout the region, mobile broadband is seen as a potential game changer on the broadband access landscape. However, there are technology challenges and cost consideration to be addressed to make this happen.

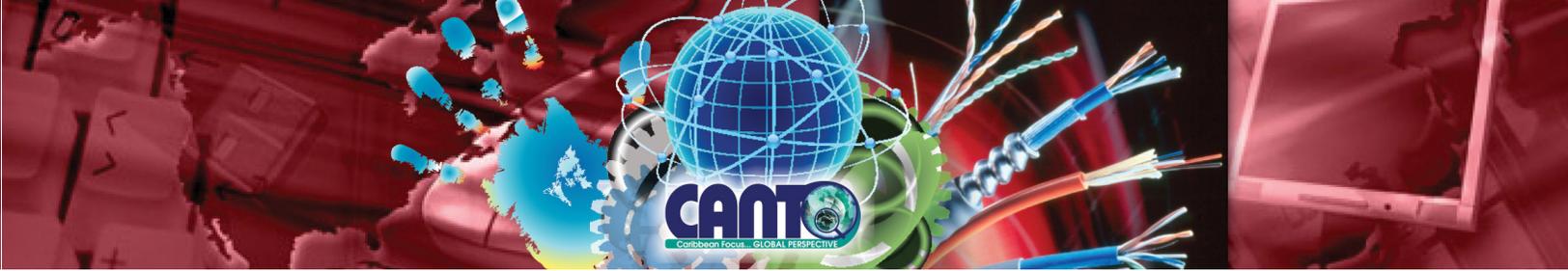
While network development in underserved communities need to be addressed, there is a recognition that demand pull factors need to be in place to support increased adoption rates. Programmes to support the development of new services and applications, to increase entrepreneurship (citizens using the technology to create employment), government providing more services online, and the private sector increasing business efficiencies through pervasive use of ICTs are vital next steps. Effective implementation of such programmes will unleash the transformative power of broadband. The government and the average citizen have to become more aware of how to put the tools to productive use. Usage has to go beyond simple email communication and social media type applications.

To facilitate this paradigm shift, CANTO has identified various areas for attention. These include modernizing and strengthening of the regulatory infrastructure; encouraging innovation and growth in new services and applications; building ICT capacity and skills; and increasing individual, corporate, and government usage of the technology.

The Broadband Infrastructure Inventory and Public Awareness in the Caribbean (BIIPAC) project is designed to address these challenges. The four components are; infrastructure gap analysis, assessment of regulatory and institutional framework, awareness and capacity building programmes and public policy recommendations for broadband expansion and usage.

The project was launched in February and the first meeting of the steering committee was convened during the conference and exhibition. The meeting served to finalize and ratify the terms of reference of the working groups as well as to agree the working procedures for the committee. The discussion at the main conference events certainly served to underscore the importance of the project and to reinforce CANTO’s commitment to delivering a successful project. The geographic scope of the project covers Dominican Republic, Trinidad and Tobago, Belize, Haiti, Jamaica, Barbados, Suriname and Guyana. Since the July meeting BIIPAC is assessing the possibility of extending the project to include Antigua & Barbuda, Dominica, Grenada, St Kitts & Nevis, St Lucia and St Vincent & the Grenadines. A potential source of funding the extension may be available through the Compete Caribbean Programme.

BIIPAC has received much interest from various stakeholder groups, especially the government sector. They eagerly await the output of the first phase of the project, which will be a broadband diagnostic and infrastructure map for the region. This output will provide evidence based data on the current state of broadband infrastructure in the region. This will form the basis for developing appropriate policies and programmes to close the infrastructure gap.



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Other CANTO initiatives that support BIIPAC goals and were showcased at the annual conference include the CANTO/Ericsson i-Create e-Content Mobile Apps Award Competition. A ceremony was held to officially acknowledge and reward the winners of the mobile applications competition. The Connect the Caribbean Project of the year competition showcased ICT related projects implemented by members in several countries. This is aimed at sharing best practises. The trade exhibition continues to be one of the main Caribbean technology events. Over 60 exhibitors displayed a wide spectrum of communication technologies, offering in-depth information on the latest developments in voice, data, image, and multimedia.

As usual a distinctive advantage of conference and trade exhibition is the networking opportunities. The happy island of Aruba hosted CANTO for the third time. It is one of the more popular CANTO destinations, and it did not disappoint. The social events were truly delightful. Great venues, food and spirited entertainment allowed for fun filled and relaxing evenings. Business is about creating and sustaining relationships, and the social side of CANTO lived up to expectations.

As the curtains closed on CANTO 2013, those privileged to be a part of this event should feel a sense of responsibility to take the messages to the average citizen in their respective countries. It is important that the rich experiences from the discussions, presentations and the exhibition are shared in our communities and schools in particular. There is a need to engage the youth to ensure the future workforce is ICT skilled for meaningful participation in the information society.

As we progress the BIPAC and other ICT development programmes - Towards a SMART Broadband Caribbean Community, we invite you to journey with us. Visit our website [www.canto.org](http://www.canto.org) for latest updates. Keep abreast of what is happening and how you can participate.

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# Hacia una Comunidad Caribeña de Banda Ancha Inteligente

## Editorial (Español)

La 29 Conferencia Anual y Exhibición Comercial fueron celebradas en Aruba del 14 al 19 de Julio. El evento fue co-auspiciado por SETAR. Participaron más de cuatrocientos cincuenta delegados. Los delegados representaron una mezcla diversa de involucrados en la industria de todo el mundo; operadores de red de telecomunicación, proveedores de servicio, profesionales de la industria, academia, reguladores, establecedores de política y Ministros regionales de gobierno con responsabilidad en el desarrollo de ICT en sus respectivos países.

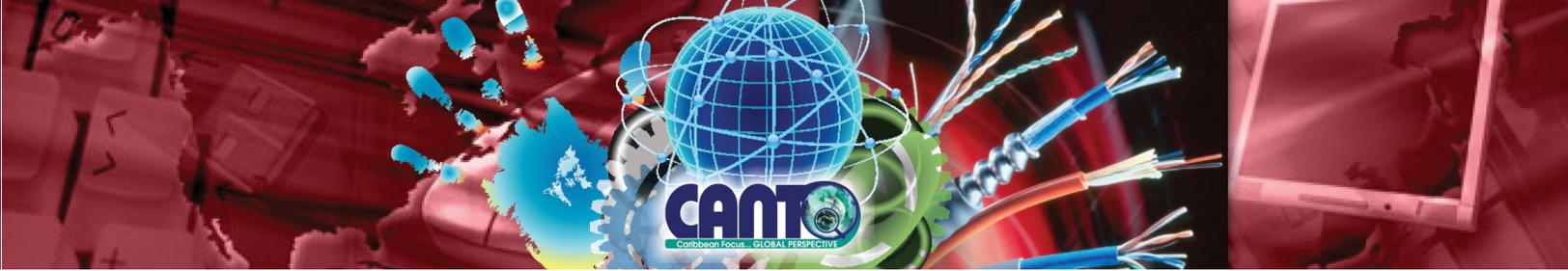
Como siempre, la conferencia proporcionó una oportunidad única para la yuxtaposición de las perspectivas de los constituyentes claves. Los representantes de gobierno hablaron a las publicaciones desde el punto de vista de asegurar que las políticas de sector promueven el desarrollo ICT, alineados con los objetivos de desarrollo nacionales en general. Este año Ministros De gobierno de diez países caribeños compartieron sus perspectivas sobre el desarrollo de banda ancha en sus respectivos países. Ningunas sorpresas, los gobiernos ven el desarrollo continuado de banda ancha en la infraestructura de red, (sobre todo en áreas sub - servidas), precios más económicos, inversiones en productos innovadores y servicios, programas de preparación y el desarrollo de habilidades, como factores necesarios para llevar el desarrollo de banda ancha al siguiente nivel. Varios Ministros identificaron el financiamiento de desarrollo de banda ancha como un desafío clave. Haciendo un uso más eficiente del empleo de fondos disponibles en los servicios universales en existencia para apoyar el desarrollo de banda ancha es una de las soluciones. Los fondos también pueden ser obtenidos por agencias

multilaterales; el Programa de Infraestructura de Comunicaciones caribeño Regional del Banco mundial (CARCIP) fue puesto como ejemplo de uno de los proyectos.

Son necesarias políticas que apoyen la innovación y el espíritu emprendedor para realzar el empleo productivo de banda ancha. En cuanto a esto, las oportunidades existen para nutrir y desarrollar contenidos de industrias locales y regionales. Fueron discutidas un número de medidas. Haciendo más disponible el contenido local y regional en línea, alineando el plan de estudios de educación terciario para apoyar el espíritu emprendedor, ampliando las conexiones de banda ancha a todas las escuelas, usando la tecnología para impartir el plan de estudios de la escuela, así como poner en práctica más usos de aplicaciones e-gobierno, fueron solamente algunas medidas exploradas.

Operadores de redes y proveedores de servicio hablaron a los desafíos en la fabricación del caso de negocio para futuras inversiones. La falta de certeza reguladora, crecimiento económico deprimido o en el mejor de los casos inactivo, la necesidad de nivelar el campo en lo que concierne a excesivo proveedores de servicio, y la necesidad de una amplia política de economía para conducir la demanda de servicios ICT, fueron los puntos más sobresalientes de la discusión. También fue ampliamente debatido el tema sobre incentivos fiscales, como la reducción de impuestos sobre el ordenador y otros dispositivos de acceso, teléfonos inteligentes.

Los representantes de gobierno explicaron que en algunos países tales tasas fiscales están ya en



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efecto. En otros países restricciones fiscales no permiten la flexibilidad para perseguir tal política. Otros estudios fueron necesarios para determinar la correlación entre impuestos reducidos sobre dispositivos de acceso y el empleo productivo de servicios de banda ancha, para justificar tal política.

La conversación fue enriquecida por la presencia de los involucrados globales de mercado, y expertos con experiencia internacional que compartieron sus puntos de vista. Presentaciones y discusiones cubrieron las tendencias de desarrollo de red, en particular en el área de tecnología móvil. Considerando el tan alto nivel de penetración móvil en todas partes de la región, la banda ancha móvil es vista como un factor potencial para el cambio en los accesos de banda ancha. Sin embargo, existen retos tecnológicos y consideraciones de costo que deben ser analizados para hacer esto realidad.

Mientras que el desarrollo de red en comunidades no accesibles tiene que ser un tema a tratar, hay un reconocimiento de que el factor de demanda tiene que estar en efecto para apoyar tarifas de adopción aumentadas. Programas para apoyar el desarrollo de nuevos servicios y usos, para aumentar el espíritu emprendedor (ciudadanos que usan la tecnología para crear el empleo), el gobierno que proporciona más servicios en línea, y en el sector privado la eficacia creciente de negocio con el uso de ICTS, son los siguientes pasos más vitales. La puesta en práctica eficaz de tales programas desencadenará el poder transformador de banda ancha. El gobierno y el ciudadano medio tienen que hacerse más conscientes de cómo poner usar estas herramientas de forma más efectivas. El

uso tiene que ir más allá de la comunicación de correo electrónico y usos de tipo de medios de comunicación sociales.

Para facilitar este cambio de paradigma, CANTO ha identificado varias áreas de atención. Estos incluyen la modernización y el refuerzo de la infraestructura reguladora; motivando la innovación y crecimiento en nuevos servicios y usos; edificando las capacidades y habilidades de ICT; e incrementando el uso individual, corporativo, y de gobierno de la tecnología.

El Inventario de Infraestructura De banda ancha y el proyecto de Conciencia Pública en el Caribe (BIIPAC) son diseñados para dirigir estos desafíos. Los cuatro componentes son; análisis de gaps de infraestructura, evaluación de marco regulador e institucional, concientización y aumento de capacidad de programas y recomendaciones públicas de política para la extensión del uso de banda ancha.

El proyecto fue lanzado en febrero. La primera reunión del comité de dirección fue convocada durante la conferencia. La reunión sirvió para ultimar y ratificar los términos de referencia de los grupos de funcionamiento así como estar de acuerdo con los procedimientos de trabajado para el comité. La discusión en los eventos principales de la conferencia ciertamente sirvió para subrayar la importancia del proyecto y reforzar el compromiso de CANTO a entrega un proyecto acertado.

El alcance geográfico del proyecto cubre República Dominicana, Trinidad y Tobago,



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Belice, Haití, Jamaica, Barbados, Surinam y Guyana. Ya desde julio reuniones de BIIPAC evalúan la posibilidad de ampliar el proyecto para incluir Antigua y Barbuda, Dominica, Granada, s. Kitts y Nieves, santa Lucía y san Vicente y las Granadinas. Una fuente potencial de financiar esta expansión puede estar disponible por el Programa Compíte caribeño.

BIIPAC ha recibido mucho interés de varios grupos de interesados, sobre todo del sector de gobierno. Ellos esperan con impaciencia el resultado de la primera fase del proyecto, que será un diagnóstico de banda ancha y el mapa de infraestructura para la región. Este resultado proporcionará evidencias basadas en datos sobre el estado corriente de infraestructura de banda ancha en la región. Esto formará la base para desarrollar la política apropiada y programas para cerrar los gaps de infraestructura.

Otras iniciativas de CANTO que apoyan los objetivos de BIIPAC y fueron mostrados en la conferencia anual incluyen el premio a contenido Apps de Móviles de las competencias e-crear y e-contenido de colaboración entre CANTO/ Ericsson. Una ceremonia fue realizada de manera oficial para reconocer y recompensar a los ganadores de la competencia. La competencia anual de los proyectos de Conectar el Caribe fue mostrado al igual que su implementación, por parte de los miembros de varios países. Esto con el objetivo de compartir, mejores prácticas.

La exposición comercial sigue siendo uno de los acontecimientos de tecnología principales del Caribe. Más de sesenta expositores mostraron un amplio espectro de tecnologías de comunicación, ofreciendo la información a fondo sobre los últimos acontecimientos de la voz, datos, imagen, y multimedia.

Como siempre, una ventaja distintiva de las conferencias y exposición comercial es la oportunidad de intercambiar. La feliz isla de Aruba recibió a CANTO para tercera vez. Esto es uno de los destinos de CANTO más populares, y esta vez no fue menos. Los eventos sociales fueron realmente encantadores. Grandes lugares, la hospitalidad, alimentos y la animación fueron parte de la diversión durante las tardes llenas y relajantes. El negocio es sobre la creación y el sostenimiento de relaciones, y el lado social de CANTO cumplió con estas expectativas.

Cuando se cerraron las cortinas de CANTO 2013, aquellos privilegiado de haber sido parte de este acontecimiento deberían sentir el sentido de la responsabilidad de llevar los mensajes a sus ciudadanos en sus respectivos países. Es importante que las experiencias de las ricas discusiones, presentaciones y la exposición sean compartidas en nuestras comunidades y en nuestras escuelas en particular. Hay una necesidad de sumar a la juventud para asegurar que la futura mano de obra es ICT experta para la participación significativa en la sociedad de la información.

Encuanto avanzamos con BIIPAC y otros programas de desarrollo ICT - Hacia una comunidad caribeña de banda ancha INTELIGENTE, le invitamos a viajar con nosotros. Visite nuestro sitio web [www.canto.org](http://www.canto.org) para últimas actualizaciones. Manténgase al corriente de que pasa y como usted puede participar.

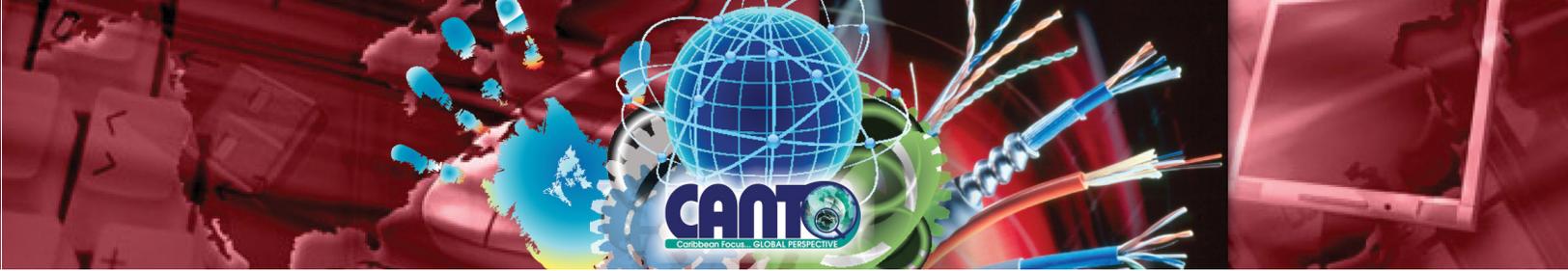
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## Caribbean ICT Ministers Discuss Broadband Rollout



**Philip Cross**

At CANTO's 29<sup>th</sup> Annual Conference and Trade Show held at the Renaissance Aruba Resort and Casino, Aruba, from 14-19 July 2013, CANTO's traditional high-level Ministerial Panel was held on the first day of the conference. Due to the large amount of Caribbean ICT Ministers, two panels were established. This allowed Caribbean Ministers to have frank discussions on broadband rollout in their countries, including the challenges and opportunities, especially with respect to the growth of GDP, job creation and the stimulation of entrepreneurship and innovation.

The first panel comprised: Hon. Evan Gumbs, Min of Infrastructure, Com, Utilities, **Anguilla**; Hon. Alvin Da Breo - Minister with responsibility for (ICT) Ministry of Communications, Works, Physical Development, Public Utilities & ICT, **Grenada**; Hon. Darcy Boyce, Min of State Responsible for Telecom, **Barbados**; Hon Charles Kirnon, Minister of Communications & Works, **Montserrat**; Hon James Fletcher, Min of Public Services, Sustainable Development, **St. Lucia**; while the second comprised Hon. Mike de Meza, Minister of Finance, Communications, Utilities and Energy, **Aruba**; Hon. Falisie Pinas, Min. of Transport, Com & Tourism, **Suriname**; Hon. Mark Vanterpool, Ministry of Communications

& Works, **Tortola**; Hon. George Lightbourne, Minister of Government Support Services, **Turks and Caicos**; Hon. Vance Amory, Minister of Telecoms, **Nevis**; Ms. Patricia De Shields, Ministry of Economic Development, **Bermuda**; Hon. Phillip Paulwell, Minister of Science, Technology, Energy and Mining, **Jamaica**.

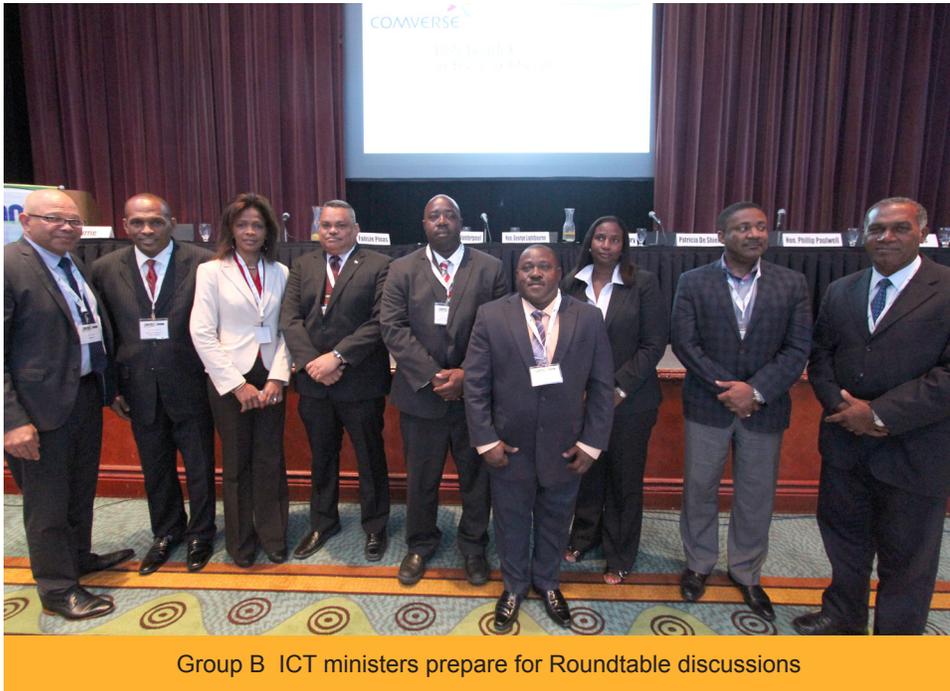
The sessions were chaired by CANTO Chair, Mr. Dirk Currie and CANTO Vice Chair Mrs. Karen Bevans.

Prior to the ministerial debate, the keynote address was presented by Mr. Lourenco Coelho, Head of Strategy and Marketing, Latin America and the Caribbean, Ericsson. Mr. Coelho spoke about bringing the networked society to life, including the transformation to smart cities. These objectives, he explained, would be facilitated by having suitable scalable and flexible broadband networks which would serve as the backbone connecting all types of data, services, applications and subscribers.

Following the first Ministerial panel discussion, there was a presentation by Comverse representatives -Mr. Luis Claramonte, General Manager, Caribbean and Mr. David Pitchett, Product Marketing Director. They explained the advantages of Comverse's Billing Software Solution (BSS) which offers converged BSS functionality aimed at optimizing customer experience and elevating competitiveness in a converged environment. The ministerial panel discussed several important aspects of broadband rollout and utilization in their countries, including the opportunities and challenges. Several key issues were discussed and these were as follows:



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Group B ICT ministers prepare for Roundtable discussions

countries the USF regime needs revision to ensure that available funds can be used for broadband activities. In addition, some governments were utilizing funds from the World Bank's Caribbean Regional Communications Infrastructure Program (CAR-CIP) project to finance broadband development.

With respect to taxes on computers, some ministers explained that they had little or very low taxes on computer equipment. For other countries where taxes were still on computer equipment, Ministers explained that it is very difficult to remove these taxes given the fiscal situation in those countries. Some also made reference to financial arrangements

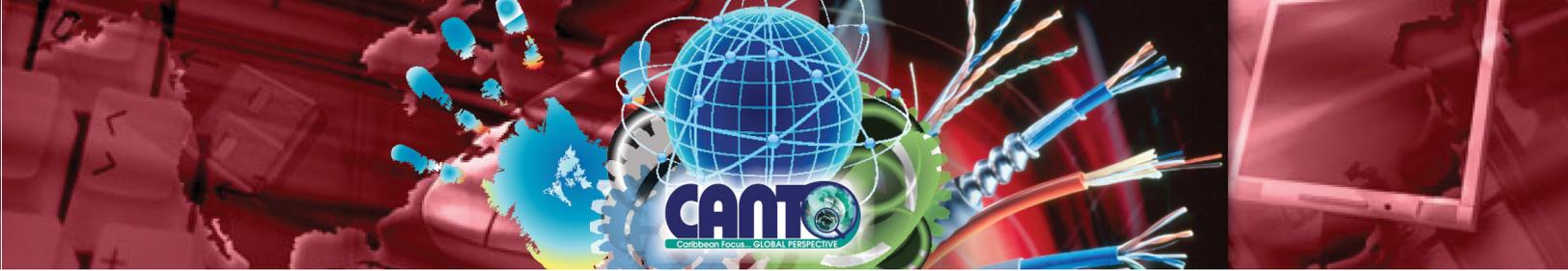
with the International Monetary Fund (IMF). They also stated that revenues from computer equipment contributed to the overall revenues obtained by governments, which are important for developmental activities. Should they become unavailable then governments would need to seek alternative sources to support budgetary activities.

They further explained that governments need to take a holistic view of national development and in some cases ICTs may seem to be receiving preferential treatment. Consequently ICTs are discussed by governments, especially during cabinet meetings, in conjunction with the agriculture, tourism, construction and other sectors. Therefore, there does not appear to be any imminent changes as far as taxation on computer equipment is concerned.

### 1. Role of government in reducing the cost of broadband and facilitating the importation of telecommunications hardware such as smart phones and computer equipment.

Ministers acknowledged the importance of broadband rollout and recognized the importance of this facility in the development of their countries. However, they also acknowledged that broadband rollout was not yet at the desired levels in their countries. At the same time, they were happy with mobile telephone penetration in their countries which had exceeded 100 % in the countries represented.

Some ministers mentioned the difficulties faced in financing broadband development and many were of the view that Universal Service Funds (USF) could be used in this regard. For some



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With respect to smart phones, a large majority of ministers were of the view that taxes and duties on smart phones were not preventing smart phone penetration in their countries. They also indicated that the poorest in their countries were able to afford these devices. Ministers also wanted operators to indicate how broadband penetration would be increased if duties on smart phones were reduced. This required additional discussions with the service providers.

The majority of ministers stated that they were of the opinion that ICT service providers simply wanted to make larger profits. In addition, there was very little data from the service providers to indicate the true situation of broadband. Some ministers also expressed a willingness to continue discussing the matter further with Caribbean service providers.

The situation in Belize was cited, in which the Belizean government reduced taxes related to broadband from 19% to 1.75% and thereby increased significantly the number of broadband users. In their responses, ministers indicated that there were no plans for imminent changes in the tax regimes for broadband rollout and the acquisition of computers and smart phones. Some ministers also indicated that while they may not be able to reduce taxes, they would also try not to have any tax increases on ICT equipment.

## **2. Government support for entrepreneurship and innovation, including the use of “crowd funding”**

Ministers in general were in favour of supporting entrepreneurship and innovation through the use of broadband. Many were in favour of funding through the existing USF regimes. One critical issue for entrepreneurship and innovation is the creation of content and this was seen as an

important justification for broadband rollout. At the moment very little information is available online about the Caribbean and Caribbean products and this required urgent attention.

Ministers also mentioned the importance of the UWI in this regard in supporting relevant courses which use broadband for delivery. Ministers explained that they wish to stimulate entrepreneurship by making greater use of mobile phones in the education system. Some ministers indicated their support for centres of excellence and innovation, as well as business incubations. There did not appear to be any significant cases of crowd funding in the Caribbean.

## **3. Government measures aimed at ensuring that the regulatory environment is in tune with the realities of convergence**

All ministers indicated that they had a fairly modern regulatory framework in their countries which helped to provide regulatory certainty. Countries of the Eastern Caribbean Telecommunications Authority (ECTEL) explained the procedure in their territories which involved national regulatory authorities working in conjunction with ECTEL. Other ministers referred to their individual regulatory regimes. Caribbean regulatory bodies are also members of the Organisation of Caribbean Utility Regulators (OOCUR).

Ministers indicated that suitable legislation and regulations were critical elements for a modern and functional regulatory environment. In this regard, several ministers made reference to the ITU project on Enhancing Competitiveness in the Caribbean through the Harmonization of ICT Policies, Legislation and Regulatory Procedures (HIPCAR). Through this project several pieces of legislation and regulations have been developed and these have been of considerable assistance to



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Caribbean governments. It was also acknowledged that technology is moving faster than governments and legislation. However, this should not deter the development of suitable legal tools to facilitate the regulatory process. This, the ministers explained, was necessary in order to provide regulatory certainty to those investing in the Caribbean.

Ministers acknowledged the importance of new technologies such as cloud computing. However, some ministers drew attention to possible security issues in relation to cloud computing, especially in respect of jurisdiction. All ministers were in agreement that cybersecurity was of critical importance for the Caribbean and as networks are developed, the necessary measures to combat cybersecurity must be put into place. This included regional and international cooperation among countries and organizations involved in cybersecurity matters.

#### **4. Government measures for stimulating broadband usage**

Ministers felt that broadband availability was the first factor in stimulating broadband usage. Therefore there was a need to increase broadband rollout. With the availability of broadband, this could be used to promote entrepreneurship and innovation. Broadband should also be seen against the background of trade agreements such as the Economic Partnership Agreement (EPA) which requires a shift of emphasis from products to services.

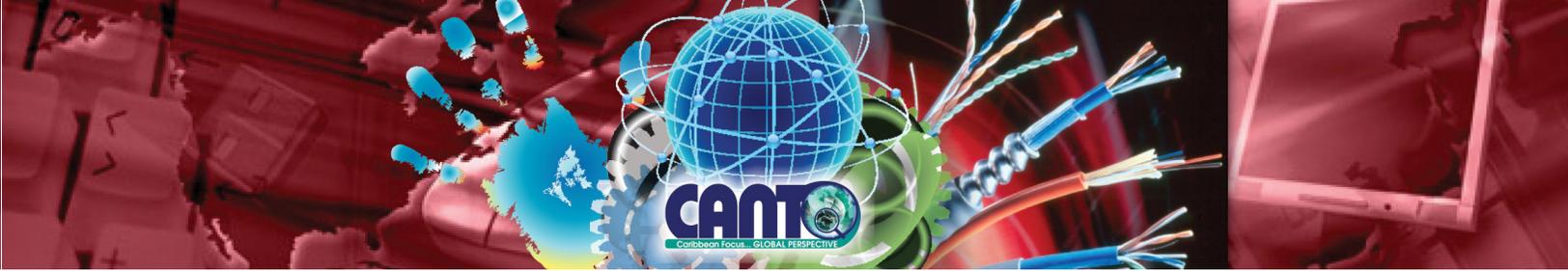
Broadband usage would also be encouraged through providers of content, include Caribbean developers of mobile applications (Apps). This is of particular importance in the music and culture industries, where very little Caribbean material is available.

Ministers explained that they would continue promoting e-government activities and making various services available throughout their countries. This would require governments to be broadband users and all communities to have access to broadband. The education sector would be encouraged to make more use of broadband for education, including the use of smart phones. These measures should encourage smart phone and computer users to make more use of opportunities provided by broadband.

Other measures that governments would support include country-wide hot spots, e-entrepreneurship programmes and the development of applications which could be purchased and used by governments. ICTs would reduce the cost of business and reduce the amount of bureaucracy

#### **5. Measures for stimulating local content development**

Most ministers gave their support to the idea of establishing Centres of Excellence which would be at the forefront of ICT development, innovation and entrepreneurship. Some ministers also suggested that governments should encourage the development of Caribbean content especially in the music and creative industries. Young persons should also be encouraged to make more use of broadband and computer facilities and this could be done through competitions and the development of Apps to promote local content. In this regard, governments should consider purchasing these products and services developed by these young persons. There was also a suggestion for the merging of creative industries and ICTs. Some ministers lamented the fact that local music and other cultural events could not be purchased online and suggested that this should be remedied.



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## 6. Government’s perspective regarding stimulation of broadband usage bearing in mind infrastructure, prices, awareness and ICTs in schools

Ministers were in agreement that significant broadband networks were necessary in their countries. Governments will try to ensure that there is regulatory certainty in order to facilitate the process. Many ministers felt that ICT service providers were making significant profits and it was difficult for governments to make additional concessions. Since regulatory bodies were in place in all countries, these would be important so that the sector was effectively regulated, including prices for services.

Ministers explained that they had stimulated and they continue to stimulate broadband usage by working with service providers and other ICT partners to have schools connected to the internet and computer equipment provided to school children. In this regard, some ministers felt that computers should be introduced to children at an earlier age than primary school. Having computers in school, the ministers explained, would help to create a new generation of Caribbean people well versed in the use of ICTs.

Ministers also felt that all education institutions including Caribbean universities should be encouraged to provide more online courses which would encourage students to use the technology. The use of smart phones for educational purposes should also be considered.

## 7. Problems posed by Over-The-Top service providers (including Skype and Vonage)

Another interesting aspect of the panel discussion concerned “over-the-top” service providers such as Skype and Vonage. With respect to this issue, ministers expressed concern that these

providers exist, utilise Caribbean networks but contribute no revenue to Caribbean operators or governments. The presence of these operators can create problems for service providers such as degradation of service, which is caused by the unauthorized use of their networks. There was a range of views on this subject. Some ministers felt that Caribbean service providers should find ways of fighting back using competitive pricing and other methods. It was mentioned that one government had resorted to blocking these services but then reversed this action. No other country has contemplated this action.

Ministers suggested that this is a serious matter and it may require regional and international cooperation. Therefore, they suggested that enquiries should be made to ascertain how other jurisdictions are dealing with this issue. At the same time, other efforts should be undertaken to obtain information and better inform the region about these operators.

## Conclusion

Caribbean ministers responsible for ICTs gave their frank opinions on the issue of broadband rollout in the Caribbean. They all felt that this was an important developmental issue which has the potential of transforming the social and economic lives of the Caribbean people. They acknowledged difficulties being faced especially regarding the financial position of many countries, but were optimistic that ways could be found to ensure that the rollout of broadband continues. This was seen as very important for the Caribbean as countries move to service economies where ICTs will play an important role. ■■■■

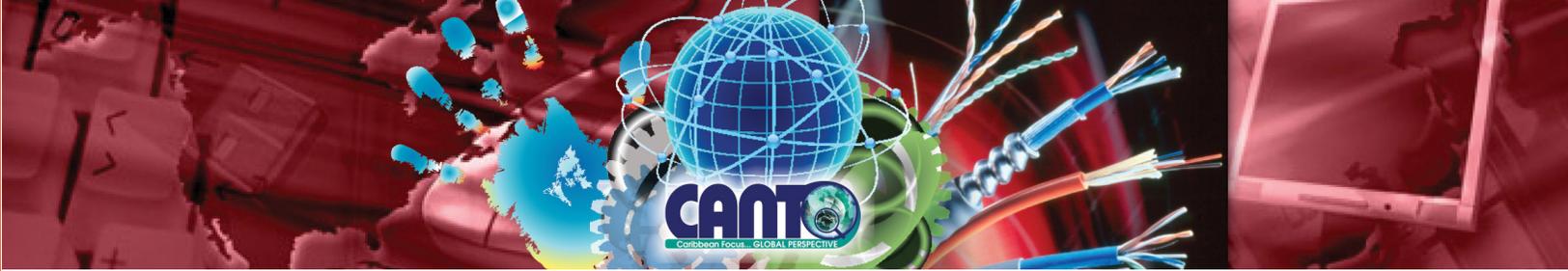
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## CANTO 2013 Hailed a Success



Cross section of delegates at opening ceremony  
R. Croes, CEO of SETAR

CANTO held its 29th Annual Conference & Trade Exhibition (CANTO 2013) in the Happy Island of Aruba from the 14 -17th of July, 2013. The highly acclaimed event was co-hosted by the local telecom operator, SETAR at the Renaissance Aruba Resort & Casino.

Over 450 delegates from CANTO's membership of 34 countries attended the four day event along with 14 Caribbean ICT government ministers. The popular annual conference and trade exhibition also known as CANTO 2013 is the Caribbean's premier telecommunications event for industry professionals, academics and regional governments. This year, the theme was "Towards a SMART Broadband Caribbean Community"

The opening ceremony of CANTO 2013 was chaired by Roxana Semeleer Ras of SETAR and addressed by Mr. Roland Croes, Director

of SETAR; Dirk Currie - Chairman, Regenie Fräser - Secretary General, Karen Bevans - Vice Chair all of CANTO; The featured address was delivered by Richard A. Arends, Chief of Staff, on behalf of Mike de Meza, the Minister of Finance, Communications, Utilities and Energy of Aruba.

Mr. Arends told delegates that the Government of Aruba is a firm believer that there is strength in the power of unity. He saluted all the island-nations and countries that were represented at the conference & trade exhibition. He reminded the delegates that the changing structure of the telecommunications industry has such an important role in all sectors of our lives and is constantly evolving which is very crucial in the development of this area.



l-r: R. Fräser, D. Currie, C. Dehring, K. Bevans, A. Samuels

The Monday morning LIME sponsored Ministerial Breakfast Briefing was a closed forum where government ministers and invited guests got a high level overview of the current ICT affairs within the Caribbean. The keynote speaker was Chris Dehring, Chief Marketing Officer of LIME and Chairman of LIME Jamaica, who



“Towards a SMART Broadband Caribbean Community”

gave a private sector perspective on broadband development including LIME initiatives; Ayanna Samuels, Regional Coordinator, gave an overview on the Broadband Infrastructure, Inventory & Public Awareness in the Caribbean (BIIPAC) Project.

CANTO prides itself on developing strategic relationships with all stakeholders in the ICT sector and its renowned, highly anticipated, Ministerial Roundtable provides a neutral forum each year, for government ministers to share their successes and concerns and seek solutions from participants which include operators, regulators, industry experts and suppliers. The ministers in attendance were from Anguilla, Barbados, Grenada, Jamaica, Montserrat, Nevis, St. Lucia, Suriname, Tortola (BVI), and Turks & Caicos.

The two government representatives were from Bermuda and Aruba. During the ministerial forum the participants took the opportunity to share their views on how the region can develop broadband plans that combine strategies and programs to foster GDP growth, create jobs and stimulate innovation. The keynote was delivered by Lourenco Coelho, Head of Strategy & Marketing, Latin America and Caribbean, Ericsson, who spoke on mobile broadband and its benefits for operators, society and government.

On Tuesday morning, CANTO 2013 hosted the “Women and Girls in ICT” breakfast meeting. This session sought to create a sustainable project which will fall under the Women and Girls in ICT umbrella; discuss potential program components and decide which activities to include; and solicit partners and sponsors to implement and deliver the project.

The event witnessed powerhouse female panelists such as: Regenie Fraser - Secretary General



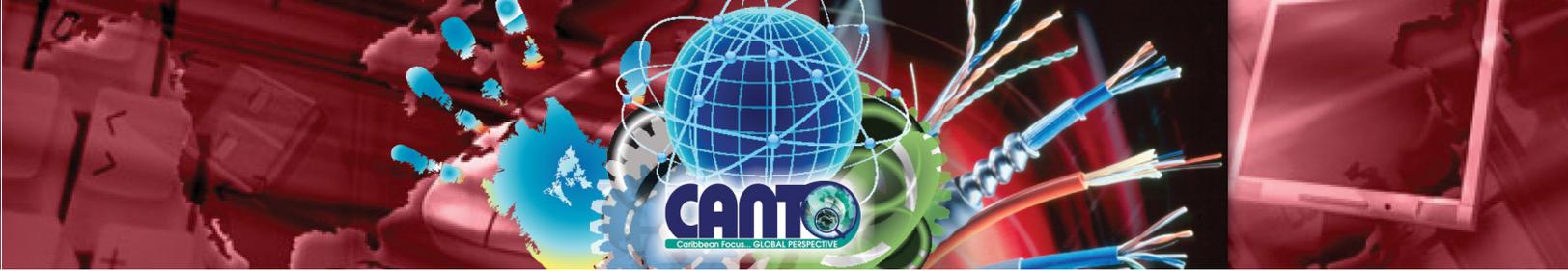
S. Maduro makes a point at women & girls breakfast meeting

of CANTO; Ronella Tjin Asjoe-Croes, CEO, Aruba Tourism Authority; Olivia Leigh Campbell Special Advisor to Minister of Science Technology Energy, & Mining, Jamaica; and Deirdre Zoe Subran-Ganesh, 2013 Winner-WTISD Essay Competition, Trinidad & Tobago.

The trade exhibition displayed the spectrum of communications technologies, offering in-depth information on the latest developments in voice, data, image, and multimedia captured in 62 booths. The best exhibit award went to Ericsson with Icemobile securing second place and Columbus Networks third. The Conference, which was co-located with the Exhibition,



From left, P. Torres & team of Ericsson pose with best exhibit award



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facilitated discourse on key issues from a panel of experts on areas such as:

- Mobile Networks, Broadband Capacity and the Regulatory Paradigm Shift
- Connect the Caribbean initiatives
- -Projects and partnership: key to regional development
- Global Initiatives and its Caribbean Impact
- Smart Partnerships
- Network Automation and Big Data equals Big Opportunities

The members of the five CANTO working committees namely Marketing and Communications, Financial Advisory, Human Resource, Disaster Recovery Planning and Regulation & Emerging Technologies also met to discuss CANTO affairs in their respective areas and also charted the way forward for even more projects to make the CANTO brand more robust.

The CTC Project of the Year was awarded to Telesur of Suriname with their project titled: Providing Broadband to Customers in the Interior of Suriname: Coping with Challenges.

Second place went to the Government of Jamaica with e-Learning II: Tablets in Schools (TIS) and third place was iGovTT from Trinidad & Tobago with their project - TTconnect Mobile Companion Application.

A spinoff of CTC is the Broadband Infrastructure and Public Awareness in the Caribbean (BIIPAC) Project, which held a two day staging of the first BIIPAC Steering Committee meeting on Jul 14 & 16, 2013. The Steering Committee's (comprising public and private players in addition to the eight IDB member countries) major challenge is how to best facilitate the future implementation of the national broadband strategies. Will the incorpora-



Some members of BIIPAC steering committee at CANTO 2013

tion of Public Private People Partnerships(PPPP) in the governance structure from the beginning play a major role? The Broadband Infrastructure and Public Awareness in the Caribbean (BIIPAC) project's objective is to support the design of national broadband strategies in the Caribbean and to identify the regional aspects that need to be incorporated into these strategies to support the Caribbean as it evolves towards universality in broadband access and service, regardless of the location or social strata of its citizenry.

The social networking events have become an integral part of CANTO's Conference and Trade exhibitions and allow patrons to unwind and network in a relaxed setting. Each night the



Delegates at social networking dinner



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Delegates at Monday night dinner sponsored by Ericsson

delegates were treated to plethora of great food and were entertained by the versatile local bands and entertainment.

The third annual CANTO/Ericsson iCreate eContent Mobile Apps Award ceremony sponsored by Ericsson took place on Monday evening. The ceremony officially acknowledged and rewarded the winners of the mobile apps



Winners of i-Create competition

competition. The first and third positions went to entrants from Suriname and second position was captured by a Trinidad & Tobago national.

On Tuesday evening, CANTO thanked all its members and sponsors at a special appreciation

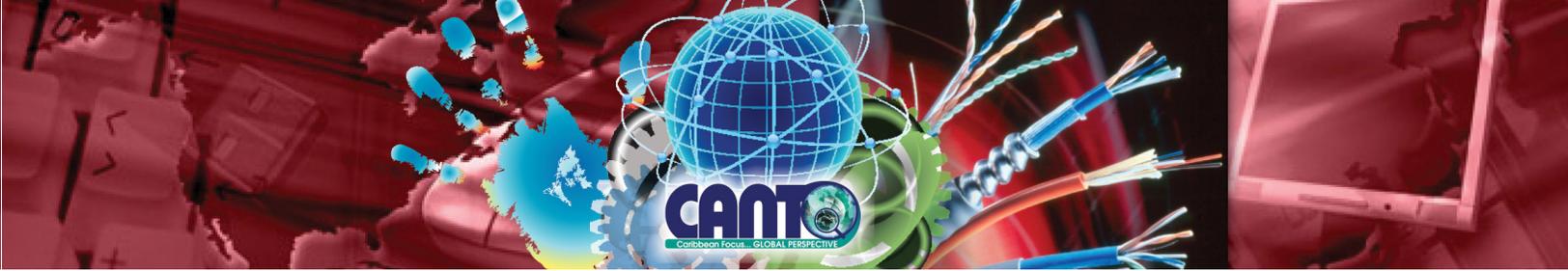


Team Facey & Oberthur at sponsored dinner

dinner, jointly sponsored by Facey Telecom and Oberthur Technologies.

The final two events were the 7th Annual CANTO Human Resource Forum (July 18-19th) and the LACNIC workshop (July 17-19th). The Human Resource forum focused on leadership development in an organization. This dynamic two-day interactive forum enabled delegates to motivate and learn how to retain the best employees during tough economic times, awaken the spirit of leadership and recognize how to use different strengths and talents to exceed objectives/expectations.

CANTO 2013 was a success and the event would not have been possible without the support of SETAR, Ericsson, Comverse, Icemobile, Oberthur Technologies, Facey Telecom, Columbus Communications, ATNI, Internet Society, LIME, iGovTT, Coyote, Ciena, LACNIC, ARIN, Parktel USA, Telem, ICTUAL, BTI Systems, SES, TMCCell, Blink Broadband, Peoplesurv, CMC, TEMPO. The CANTO train heads to Jamaica in January 2014 where the 30th AGM will be hosted by LIME. For more information on CANTO 2013 visit [www.canto.org/canto2013](http://www.canto.org/canto2013)



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## Team iDeals of Suriname Captures First Place in the CANTO/Ericsson 3rd Annual i-Create e-Content Competition!



l-r: L.Coelho, of Ericsson with C. Siadis, R.Fräser & R. Soemodihardjo

The iDeals team comprising of Clint Siadis and Ryan Soemodihardjo of Suriname is the winner of CANTO/Ericsson’s third i-Create,e-Content Mobile Apps Competition. The annual competition rewards the most creative and innovative mobile application (apps) developers in the Caribbean. The competition was staged in all CANTO member countries.

Team iDeals emerged front runner with their submissions entitled iDeals under the e-Business & Commerce e-Inclusion & Participation category. iDeals is a mobile application for Android which offers you a wide range of exclusive deals in Suriname. iDeals is constantly updated with new deals from the participating cities and businesses and notifies users instantly through push notification.



l-r: L. Coelho, A. Thompson, R. Fräser

Signature Coding of Trinidad & Tobago came in second place with TNT Movie Guide under the Mobile Recreation and Entertainment category. TNT Movie Guide is a multi-platform mobile application that provides movie information with theatres and show times in Trinidad & Tobago. It also provides trailers, reviews from Rotten Tomatoes™, new movie indicators and offline availability. TNT Movie Guide also uses the mobile phones’ built in location capabilities to calculate distance from cinemas

Third place went to iFrontier led by Achmed Neijhorst, Managing Director and team lead of iFrontier an ICT company based in Suriname. The application named Yepi Seti is an android mobile application in the Mobile Government & Participation category. The application is designed to help local communities and the government



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I-r: L. Coelho, A. Neijhorst

in Suriname to foster a better neighbourhood and environment. Citizens get the opportunity to immediately report issues which are wrong in their neighbourhood and are informed when these issues are resolved. In this way government and citizens can work together to improve local conditions.

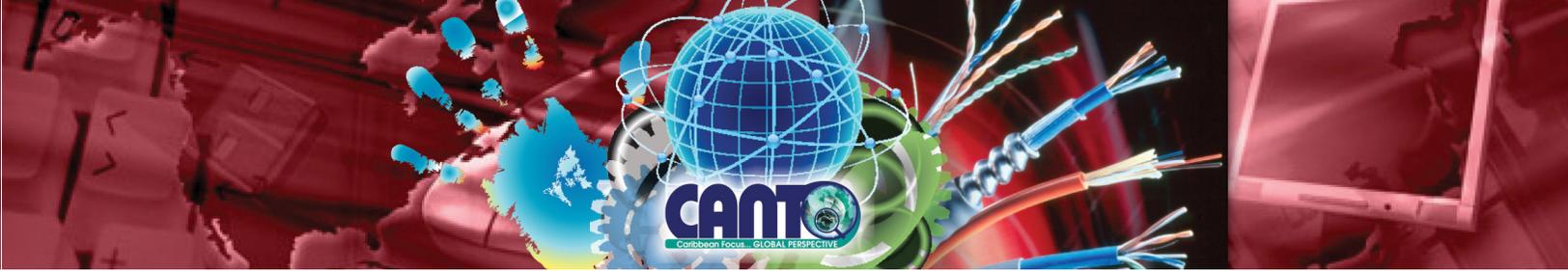
In fourth place was team KleverApps out of Grenada with their Mobile Learning & Education entry called TAMCC Mobile. TAMCC Mobile was developed by Kevin Johnson and Aniel Bartholomew as a new means of advertising for the TAMCC College based in Grenada.

This app helps inform current and prospective students of the programmes and courses available at the college. TAMCC’s events, time table for all programmes, extracurricular activities and much more will be implemented into the application to help the students be up to date with the current information.

The submissions were judged in the following categories ranging from relevance of the application, quality and comprehensiveness, ease-of-use, functionality & design, quality of design, value added through interactivity & multimedia, quality of craftsmanship and strategic importance to the region. There were four (4) experts in the field of ICT used to judge the competition hailing from Barbados, Belize, Suriname and Trinidad & Tobago.

The top three winners were provided with an all-expense paid trip to Aruba where they attended the prestigious Ericsson i-Create e-Content Competition award ceremony at CANTO’s 29th Annual Conference & Trade Exhibition (CANTO 2013). Other prizes included cash, computer tablets and internships. CANTO thanks its platinum and headline sponsor Ericsson.





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## My Aruba Experience

Dierdre Zoe Subran-Ganesh



As soon as I arrived in Aruba, and before I had checked in to the hotel, I was whisked away to the press conference for CANTO's 29th Annual Conference & Trade Exhibition. There was also the launch of CANTO's new website by CANTO's Director, Julian Wilkins. This was the start of a very informative, interesting and pleasant stay in Aruba. By the time I had unpacked, it was time to attend the official Opening Ceremony at the Crystal Theatre, Marina Hotel where top CANTO officials and other dignitaries were introduced to the audience. Main speakers included the very graceful and intelligent, Ms. Regenie Fräser, Secretary General and Mr. Dirk Currie, Chairman of CANTO, as well as representatives from Aruba. After, as we proceeded to the ribbon cutting and cocktail reception, we were treated to different features of the unique culture of Aruba. I had the opportunity to visit the numerous exhibition booths that focused on different aspects of telecommunications, such as

communications service providers and suppliers of telecommunications equipment. I was amazed at the various products on display and received several tokens. Some persons in the ICT business gave me some interesting advice regarding my career path.

One of the highlights of my trip was the Women's Breakfast meeting where I was able to speak on the topic "Women and Girls in ICT." I was nervous and scared but the other speakers were quite sensitive to my feelings and encouraged me before I went to the podium. I also had the opportunity to listen to some powerful women from the Caribbean region who spoke on the same topic. This was followed by an interactive session afterwards where members of the audience were able to voice their opinions on the topic.

In addition, I was able to meet and intermingle with the winners of the iCREATE mobile apps contest at the Ericsson Dinner who shared their interesting ideas with me.

Every afternoon I enjoyed taking a refreshing dip in the cool ocean pool at the Renaissance Hotel. Whenever I needed assistance, CANTO staff was always there to assist especially Ms. Tricia Balthazar who always made sure I was well taken care of.

After four nights in Aruba, my trip came to an end and was even more memorable when I travelled on a 15-seat plane to Curaçao. I truly appreciate the trip along with the other prizes of a Kindle Fire and USD \$1000. ■■■■



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## Taking Customer Experience Management to New Levels

**Mats Palving**  
Head of OSS/BSS, Ericsson Latin America

*High on the operator agenda today is service quality and customer experience. Poor customer care, as well as a perception of poor end-to-end experience, are main reasons for churn today. As operators get ready to confront increased competition, aiming at maintaining market share and protecting their position in the value chain of the communications and entertainment industry, they are faced with new challenges.*

*On one hand, we have the complexity brought on by the increase in users, partners, services, devices and traffic. On the other hand, we have the opportunities made available by more advanced Customer Experience Management, where data is collected from all sides of the service provider's network and business operations. Ericsson's Mats Palving explains the scale of the challenge and how operators can simplify and accelerate the process of enabling excellent customer service delivery.*

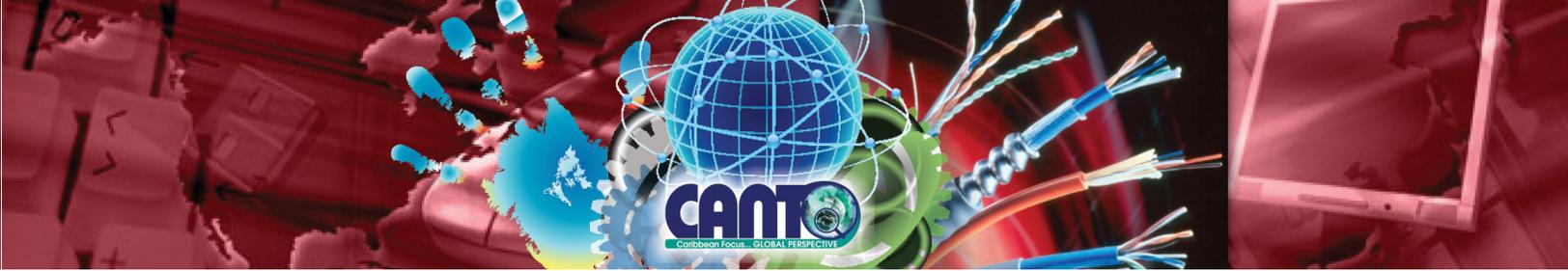
Service quality and customer experience are critical to an operator's ability to gain and maintain market share. However, these areas have become increasingly complex, as new services, devices, participants and business models come to market. Operators can simplify and accelerate the process of enabling excellent customer service delivery. It starts with operations recognizing the customer instead of the network element.

The telecommunications industry, on both the operator and the vendor side, still has a very engineering-focused approach to the business. What does a dropped call mean? Is it a problem with a base station, or is it an unhappy customer?

Measurements and optimization around network performance is crucial (see findings presented below). Without coverage and capacity with quality, the operator does not have much to offer. But, in today's increasingly competitive environment, where monetization from data traffic, fighting off classic competition, and finding ways to deal with the over-the-top (OTT) players, the end user needs to be given greater importance. He or she needs to feel appreciated as an individual. A certain level of cultural change is called for in order for the “one-size-fits-all” large telco operator of today to adjust to and cope with the new business models being brought into the industry from social media, application providers and OTT players.

### Increased complexity in the value chain and go-to-market models

An alternative approach to maintaining and improving the end-user experience is needed in order to adapt to the developments that the telecoms sector is going through. Those developments encompass a far wider portfolio of services being delivered by operators and over-the-top service providers. The delivery chain has become more complex as a result, with many more partners and relationships being established. But end users don't care about that—they just want their services delivered effectively and reliably. This puts pressure on operators, because faults originating from third-party service providers could be wrongly attributed to the operator by the end user. Equally, faults within an operator can affect end users' perceptions of the service they receive from a third-party provider; for operators,



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the stakes are now far higher when it comes to ensuring a good customer experience, because they have not only their own customers to satisfy, but also those of their partners.

In saturated markets, service quality is focused on retaining existing subscribers, whereas in emerging markets, there is a trend toward providing superior quality as a means to attract new customers. While the network remains critical, operators need to shift away from their traditional focus on the network and balance it with equal focus on service performance and the experience that their customers actually receive.

It is also important to understand what service assurance is about. It is not, for example, always about delivering the best possible quality to end users, but rather the right level of quality to fit a specific offering and price, allowing a higher class of service to be offered to those users comfortable with paying more for a better service, while those with limited budgets can opt for lower service quality and save money.

In fact, when it comes to service quality, the stakes are very high. Ericsson has modeled the potential additional revenue that an operator in a mature market could generate from the enhanced end-user satisfaction that results from improved service and network. Key findings include:

- *By optimizing radio quality, operator revenue per subscriber can increase by 6.9%.*
- *By optimizing resource utilization, operators can achieve a 4% gain in infrastructure efficiency.*

- *By optimizing maximized coverage, operators' cost per packet can drop by 4.8%.*
- *By improving network design, future coverage gains of 8.6% can be achieved.*

These are in addition to a range of non-quantifiable benefits centered on reduced churn and more effective capture of additional revenues.

### Effective Customer Experience Management goes hand-in-hand with Big Data

The realization of the potential around Big Data collection and analytics is pushing Customer Experience Management (CEM) to new levels. The operator sits on a gold mine in terms of availability of rich network information and user data. However, until now, a solid process for the end-to-end handling of CEM has not been available. Tools exist, and the area is being addressed, but so far on a case-by-case basis.

What has not been considered to a larger extent is the aspect of mixing technical network data with more personal user data. One challenge, therefore, is to describe the process around the collection and processing of very large amounts of real-time and historical data; another challenge is to agree on acceptable levels of performance and thresholds for perceived quality, mood and loyalty ratings, as well as other softer indicators.

In real world engagements, Ericsson has worked to deliver service quality improvements across a range of operations. For example, at one operator, during a service quality investigation and

*continued on pg.25*



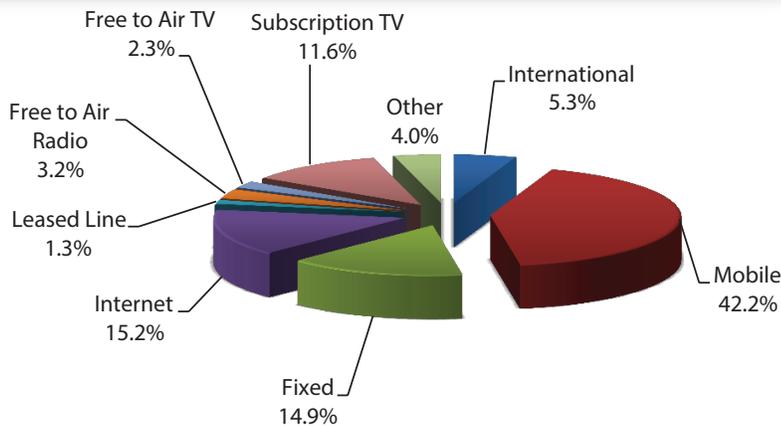
# Telecommunications Authority of Trinidad and Tobago

## Trinidad and Tobago's Telecommunications & Broadcasting Sectors CONTINUE to REFLECT GROWTH

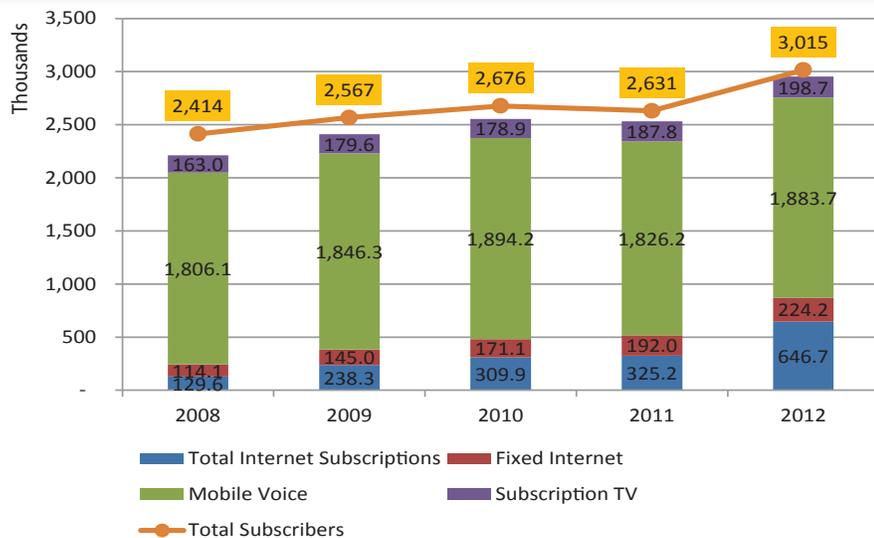


Trinidad and Tobago's telecommunications and broadcasting sectors continue to reflect growth during the period January to December 2012. Combined revenues for both sectors amounted to TT \$5.3 billion<sup>1</sup> or US \$834.1 million<sup>2</sup>. This figure equates to 3.3 per cent of this country's Gross domestic Product.

The chart below outlines percentages of gross revenues contributed to both the telecommunications and broadcasting markets during 2012.



The chart below supplies subscription statistics for the five year period 2008 to 2013.



The Telecommunications Authority of Trinidad and Tobago (TATT) continues to work towards the development of these sectors which ultimately contribute to Information and Communications Technology development in the Caribbean region.

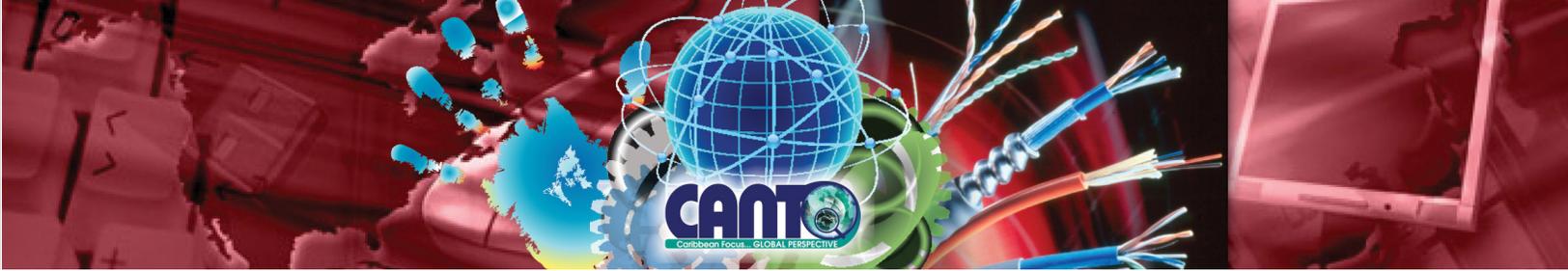
For more facts and figures please see TATT's article in this publication.

<sup>1</sup> This Figure includes revenues from telecommunications and broadcasting services offered to members of the general public and private leased line services.

<sup>2</sup> Estimated exchange rate US\$1=TT\$6.37

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benchmarking process using ETSI-based S-KPIs (Service-Key Performance Indicators) combined with the Ericsson world-wide benchmark database, Ericsson found that the operator had a remarkably poor network setup success rate for mobile data services. The operator and the vendor were aware of the issues but didn't know how to solve them, so instead chose to ignore them, resulting in churn. It was, therefore, a high priority for the management team to fix the network access issue and also the reporting process. Advanced tool capabilities in traffic analysis made the network access problems easy to recognize and troubleshoot at the source.

Recently, Ericsson has engaged with operators to address the challenge presented by the arrival of smartphones in the mainstream market. This has altered the balance between signaling load and traffic load, since smartphones are heavy consumers of signaling traffic. This is partly due to changes in user behavior, and partly the increased use of social networking, chat applications and the fast dormancy feature. At one operator, traffic analysis found that fast dormancy of smartphones causes constant connections and disconnections. Further analysis showed that, in a worst-case scenario, 80% of radio access establishments were affected by this behavior. As a direct consequence, the operator had to expand the access network in order to guarantee the desired service quality.

Social networking also brings new service quality challenges to operators. A large share of all mobile data transactions are related to social networking services, especially Facebook.

As a result, this application has a direct impact on the operator's revenue. To understand this better, at another operator, Ericsson's Service Quality Optimization framework was deployed to deliver troubleshooting capabilities based on key performance indicators. As a result, an advice algorithm for analyzing traffic patterns was applied on the operator's network, revealing that public social networking applications were by far the most dominant, generating more than 75% of all traffic. Previously, the operator was unaware of this fact.

The objective of well-implemented CEM is to create business value through the identification and interpretation of perceived experience and the ability to take preemptive and/or corrective actions, involving various departments of an operator's network and business operation. Setting a strategy, identifying and agreeing on business goals, aligning these across the organization, and then landing this in a process that can be implemented across the board is not a small task.

Consulting is an important cornerstone in this work. Consultants can move between and through the traditional lines of demarcation between the various departments within operators, without disrupting existing processes and circles of responsibility or hierarchies as an organizational transformation might. An independent organization can be the facilitator for improved customer experience, and critically, can be a facilitator with an opinion to bring to the project.





“Towards a SMART Broadband Caribbean Community”

## CANTO Caribbean Round Up - May 2013

### Big changes ahead for LIME

Cable & Wireless Communications’ (C&WC) full year results were anything but encouraging though in a demonstration of its commitment to its Panamerican business, the company announced it will shift its headquarters from London to Florida.

The company posted a 4% decline in revenue in its financial year ending March 31, as the company battles to move away from its traditional voice-centric business to a more data focused one.

In the Caribbean, where the company operates as LIME, revenues fell 4%, mobile revenue fell 1% and mobile subscriber numbers were broadly flat.

Broadband and TV revenue was down 2% despite the launch of LIME TV in Barbados, fixed voice revenue declined 10% and enterprise data and other revenue fell 7%.

But not all is doom and gloom, according to the company. C&WC said it is seeking to cut costs by US\$100mn within two years, which is part of a restructuring plan that will see the sale of assets in Macau, Monaco and island nations.

CEO Tony Rice said the asset sales would free up cash for the company to grow both organically and inorganically.

On the organic side C&WC is looking to further invest in fiber and HSPA+ 4G networks to drive pay TV and broadband. On the inorganic side the company is looking for acquisitions.

Rice said that the opportunity to grow with data offerings is huge given the low smartphone, pay TV and broadband penetration in the Caribbean, as well as growing per capita incomes.

The only snag, he said, is getting its commercial offerings right.

Perhaps something that will help is the joint venture the company entered into in May with Columbus Networks to provide international wholesale capacity to each other and to third parties.

Columbus will have a 72.5% majority share and management control.

Rice said the alliance positions C&WC to meet the data capacity demands of its retail operations in the future and optimizes its capital expenditure commitment to its undersea cable networks.

### Auctions and network upgrades

In other news, Jamaica’s government said it expects to earn a minimum of US\$85mn from an auction for 700MHz spectrum intended for LTE 4G communications.

A request for bids is due on May 22. A mobile spectrum cap of 80MHz for existing operators Digicel and LIME is proposed.

To foster competition, amendments to the Telecommunications Act in May 2012 mandated the introduction of infrastructure sharing and number portability (NP).

*continued on pg.31*

# Caribbean ICT Ministers' Roundtable



Hon. Darcy Boyce  
Barbados



Hon. James Fletcher  
St. Lucia



Hon. Charles Kirnon  
Montserrat



Hon. Phillip Paulwell  
Jamaica



Hon. Evan Gumbs  
Anguilla



Hon. Alvin Martin Da Breo  
Grenada



Hon. Falisie Pinas  
Suriname



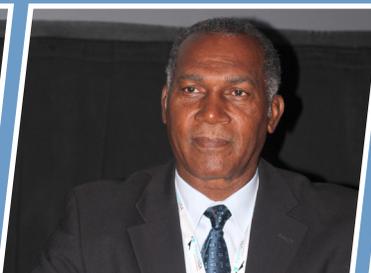
Hon. Mark Vanterpool  
Tortola



Ms. Patricia De Shields  
Bermuda



Hon. George Lightbourne  
Turks and Caicos



Hon. Vance Amory  
Nevis



Keynote Speaker  
Mr. Lourenco Coelho  
Ericsson



Mr. Dirk Currie  
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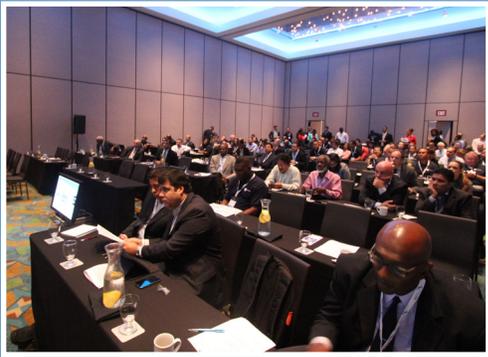


Regenie Fraser  
Secretary General

# Highlights of CAN



# TO 2013 - ARUBA



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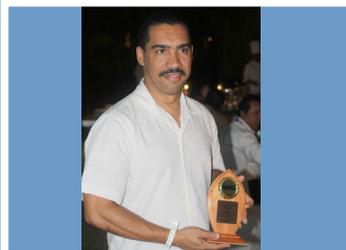
INTERNET SOCIETY



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ICTUAL



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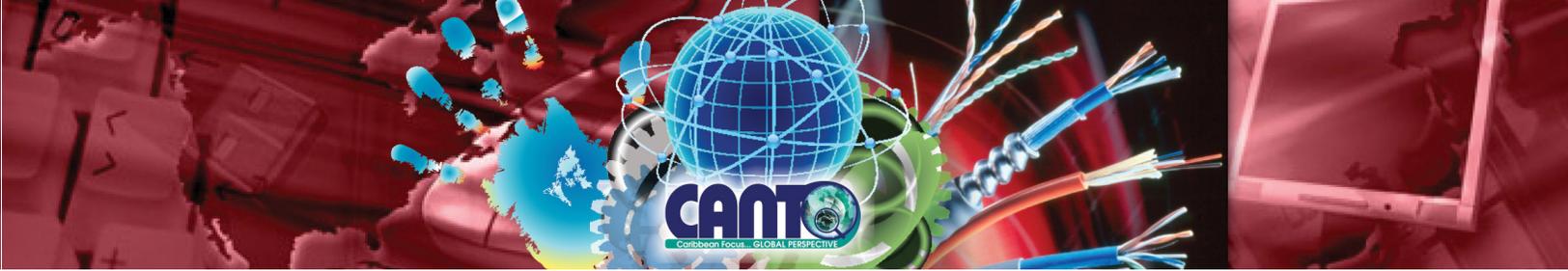
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Columbus Communications has announced plans to construct a new broadband network in Barbados, investing in excess of 120mn Barbados dollars (US\$60mn).

By the end of 2013 Columbus expects to reach 30% of Barbados households. Columbus entered Barbados last year with the acquisition of TeleBarbados and Karib Cable.

Digicel launched 4G HSPA+ in St Kitts and Nevis covering 96% of the twin isle nation with speeds of up to 21Mbps. With the launch, 16 of Digicel's 31 markets have HSPA+ and one, Antigua and Barbuda, has LTE.

LIME launched LIME TV pay TV service in the Cayman Islands making it the first quad-play provider in the Caribbean. LIME also offers pay TV services in Barbados and St Lucia, in addition to mobile TV in Jamaica.

### **International connectivity**

Carrier of carriers GlobeNet, a subsidiary of Brazilian telecoms operator Oi completed construction of its Segment 5 subsea cable system connecting Bermuda to the US.

The company's submarine cable network spans 22,000km and connects Bermuda, Brazil, the US and Venezuela, with further plans to extend to Colombia.

And Cuban state operator ETECSA has begun to receive international internet service from Jamaica through a portion of the Alba-1 submarine cable.

The Alba-1 cable, which runs from Venezuela to Cuba and Jamaica, received the go-ahead in November 2010.

No Cuban Internet activity was seen via the cable until January 14 of this year, when Spanish telco Telefónica began to provide services to ETECSA via the Alba-1 submarine cable. ETECSA now also appears to be receiving Internet traffic through the Jamaican unit of C&WC.

### **In Brief**

Belize state-owned telecoms company Belize Telemedia Limited (BTL) dropped restrictions on VoIP, opening the service to all BTL subscribers using DSL, fixed broadband, CDMA and EDGE /3G mobile internet services.

AT&T extended the reach of its LTE service in Puerto Rico to the adjacent Vieques Island.

Data hosting firm Secure Hosting opened its second data center in the Bahamas, in the nation's second largest city, Freeport. The company has existing data centers in Nassau, Bahamas, and Hamilton in Bermuda.

Secure Hosting founder Richard Douglas praised the Bahamas as a location for doing business underscoring the government's dedication to protecting privacy and data security.

Torrent file-sharing website The Pirate Bay has moved its domain to the Caribbean island of St Martin. Swedish prosecutors threatened the site's Icelandic domain, forcing the move.



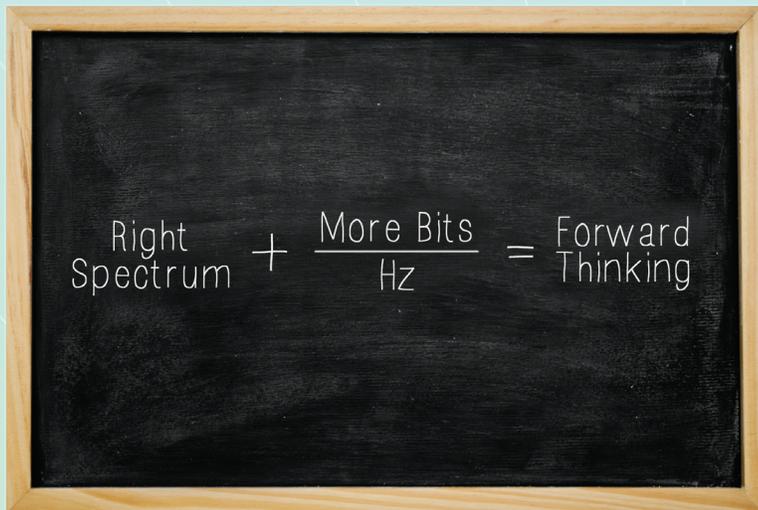
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The government of Jamaica is launching a year-long pilot program to distribute free tablets to students and teachers at 30 educational institutions on the island.

The governor of Puerto Rico, Alejandro García-Padilla signed an MOU and cooperation framework with Microsoft to develop the territory as an exponent of cloud computing and job creation in technology.

## Appointments

Mobile operator Digicel appointed Barry O’Brien as its CEO for Jamaica. O’Brien previously lead the telco’s operations in Barbados and Dominica. C&WC appointed its CEO Tony Rice as chairman of the board of the Bahamas Telecommunications Company. Cable & Wireless also appointed Chris Dehring as BTC’s director. ■■■■

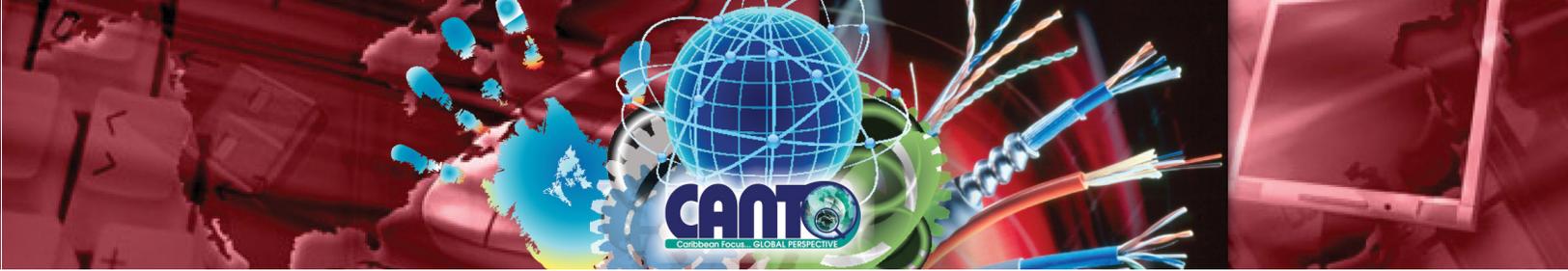


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## Women and Girls in ICT: Striving for Higher Heights

Ayanna Samuels - Regional Coordinator,  
(BIIPAC) Project



One of the highlights of the 29th CANTO Conference and Trade Show Exhibition was the staging of the LACNIC sponsored Women and Girls in ICT Breakfast, on July 16, 2013. The session had a distinguished panel which comprised Olivia Leigh Campbell, Special Advisor to the Minister of Science, Technology, Energy and Mining, Jamaica; Ronella Tjin Asjoe-Croes, CEO, Aruba Tourism Authority; Deirdre Zoe Subran-Ganesh, Winner CANTO’s 2013 Essay Competition on “ICTs on Improving Road Safety”; and Regenie Fräser, Secretary General of CANTO. The focus of the panel was International Women and Girls in ICT, with special emphasis on the Caribbean.

All the panelists detailed important points as they discussed the all important issue of increasing the number of women and girls currently involved in ICTs. A summary of their contributions is as follows:

### Regenie Fräser detailed:

1. CANTO in partnership with Soroptimist International of Port of Spain is currently of the International Women and Girls in ICT - Partnership and Participation Initiative.
2. In the first instance, the initiative has focused on women and girls in Trinidad & Tobago and is now seeking to create a sustainable project with a focus on ICTs and development.
3. The purpose of the initiative is three-fold:
  - a. create a sustainable project which will fall under the Women and Girls in ICT umbrella.
  - b. Discuss potential program components and decide what activities to include.
  - c. Solicit partners and sponsors to implement and deliver the project.

### Olivia Leigh Campbell informed the gathering of the following developments:

1. The government of Jamaica undertaking a mapping project of various points of interest across the entire island
2. This project will help to outfit a more detailed GPS offering to persons who seek to learn about the island.
3. Persons getting out into the communities and obtaining the information are mostly women, providing a mode of employment and further knowledge regarding mapping technology.



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4. The women will be paid for gathering details from each institution visited

#### Ronella Tjin Asjoe-Croes brought a tourism perspective by sharing:

The representation of women in key ICT positions globally is diminishing and there is also a decline of female interest in computer science. However, when main frame computers were first invented, it was young women who did the programming and when computers science courses first appeared on the university scene in the late 70s, the proportion of young men and women taking these courses was about 50/50 whereas today it is closer to 80/20.

Geena Davis, the ITU Special Envoy for Women and Girls theorizes that the present marginalization of women in ICTs may be due *to the fact that* there is presently a tremendous increase in the sexualization of women; encouraging women to feel at an early stage that appearance is more important than academic knowledge.

The importance of tourism to Aruba’s economy and by extension the world’s economy and the fact that it is so highly integrated and intertwined with ICTs, demonstrates that further growth within the travel and tourism industry will rely heavily on the success of the ICT industry.

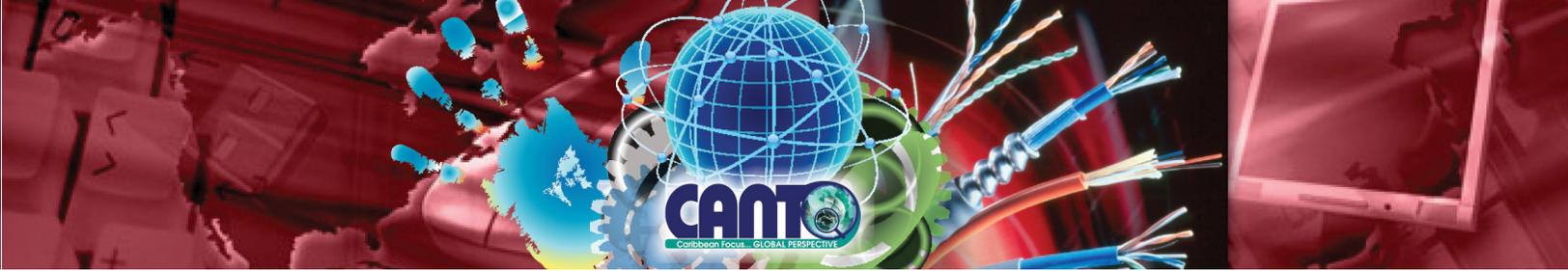
It is expected that by 2020, over 50 billion more devices are going to be connected to the Internet and that another 2.5 billion people are coming online! The US alone will need an additional 1.7 million people to work in ICT in the next coming years! Clearly ICT is an industry in which the demand of skilled people including women is crucial.

#### Deirdre Zoe Subran-Ganesh shared the following younger perspective:

- According to Huyer (2003), with the exception of a few countries, women and girls have less access to education and lower levels of literacy. Direct efforts should thus be made to reverse this trend.
- Governments should make available internet connections at public places such as libraries, community centres and shopping malls and allow women to operate some of these stations so that potential female users do not feel intimidated.
- According to the United Nations Youth Employment Network Initiative, ICTs are a means of creating more jobs for youths, particularly females. This should be remembered by key decision makers, when seeking to create jobs.
- The above efforts would undoubtedly lead to educated, employed and empowered women and girls in the ICT field.

The participants of the breakfast session contributed to a lively and informative Q&A session. The major highlighted points were:

1. A LIME professional detailed that she has struggled with ideas for ICT community service programmes centred at girls in schools and is thus open to suggestions and project ideas. A partnership was directly formed with the BIIPAC Regional Coordinator, Ayanna Samuels, who promised to liaise with her regarding constructing a mentorship programme for young girls in Jamaica.



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2. It was suggested that a project focused on the rehabilitation of incarcerated women would have far reaching positive effects. Ms. Fräser then opined that such a project could be constructed as a regional endeavour. There was collective agreement across the room.

3. The sensitization of girls in ICT must begin at the kindergarten level it was stressed that this is the age at which the groundwork is set for how girls will think about themselves into the future.

4. A participant relayed a personal story of a teaching opportunity at a prominent Jamaican high school. Whilst teaching a class of 11 to 12 year olds, she was advised by one of the female students that there were jobs females could not do such as engineering and construction. Upon advising the child that she was herself an Aerospace Engineer, the child came into a new light of understanding. The participant expressed wanting to spread this light of knowledge to other Caribbean young females.

**The following project ideas were honed from the proceedings of the breakfast:**

### **1. Project Title: Summer Shadow Internships**

The FCC in the USA has a summer programme for female high school students from North Africa and Arab states. There is not certainty as to the funding agency but it is thought that it could perhaps be USAID. Regenie Fräser suggested that the ITU may have a similar programme for the Caribbean. A similar internship of a proposed duration of probably two weeks at the ITU Barbados office, or any of the regulatory agencies throughout the region could be a similar enriching opportunity for Caribbean high school

young females, in fourth and fifth form.

Objective: Provide exposure to female students on the cusp of applying to university to careers in ICTs.

### **Potential Programme Components:-**

- a suitable funder is to be identified, such as the ITU, CANTO, Soroptimist International, LACNIC, etc.
- Identify females in lead positions who could be mentors for these ladies
- Pair mentors with successful mentee applicants, paying attention to the area of interest of the applicant, for a two week summer internship
- Ensure the programme is well marketed to secure a high number of applicants.

### **2. Project Title: Prison Rehabilitation Initiative**

A major area of concern for the general prison population is effective rehabilitation to ensure successful re-integration into society, without a repeat of offences. Women who have been incarcerated tend to be more stigmatized than their male counterparts as women are generally expected to lead lives, which traverse more closely the "straight and narrow". There can thus be a lot of shame and condemnation post release. Any sort of meaningful rehabilitation intervention would thus go a long way in ensuring these women are able to contribute positively to society, and pass on centred ideals when mothering society's next generation.

In order to affect this goal, in addition to psychological intervention whenever necessary, an effective way to build self-esteem and safe guard the future of our women and girls is to teach



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them a skill, which can ensure job security post release. Given the growing opportunities within ICTs, teaching ICT skills would be a sure-fire way to pass on a skill which has the potential for self-empowerment and affecting socio-economic development.

Objective: Assist with the rehabilitation of female incarcerated individuals by teaching them career building ICT skills

#### Potential Programme Components:-

- Assemble preferably female volunteers to teach ICT skills within prisons across a number of Caribbean countries. Time spent with any one cadre of incarcerated girls and/or women need not exceed one hour per week

- Implement a training programme which is in sync with market demands for skills and with which the women and girls may become independent ICT professionals.

- Track girls and/or women upon their release to assess career development and rate of repeat offenders.

#### 3. Project Title: Females in ICT Mentorship for Kindergarten Girls

Self-empowerment intervention during the formative years of our young women is absolutely vital to ensure the percentage of women in ICTs increases into the future. To effect this, female professionals within telecoms agencies and well minded female ICT entrepreneurs, could come together to provide mentorship visits to a range of schools to show little girls, 'in living colour', what they can be in the future. The transformative power of seeing a professional female, in a

successful career, who looks like an older version of her, speaks like her, and is from the same country, cannot be overstated. Such mentorship would help to lock in the self-confidence of these females and reassure them that they truly can be anything they desire in life.

Objective: Enlist female ICT professionals to provide mentorship to kindergarten girls around possible future career possibilities.

#### Potential Programme Components:-

- Ask the attendants at the Women and Girls in ICT breakfast to assist in being volunteers and to spreading the word to obtain more, for the execution of his initiative.

- Speak with principals at a range of schools representing various socio economic realities, about having a Females in ICT Career Mentorship Day, three times per year.

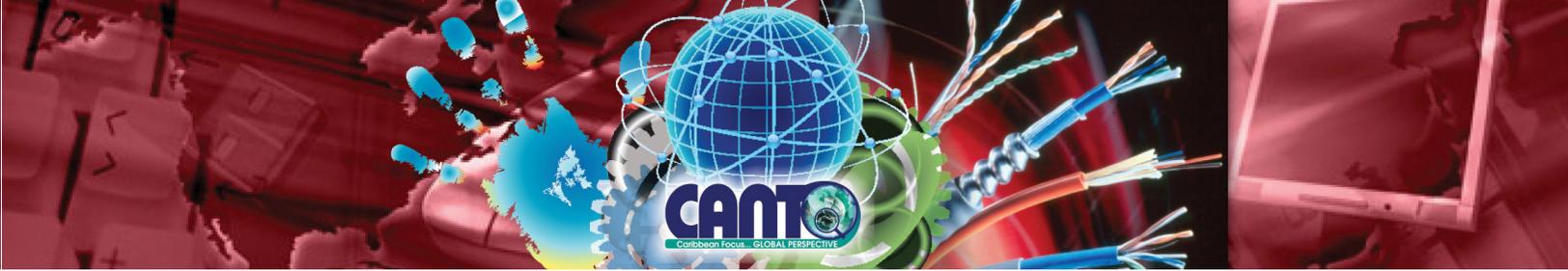
- Sessions need not be more than 1 – 1.5 hours per trip

- Enlist the media to ensure inspiring publicity throughout the country

- Grow the volunteer body and the number of Caribbean countries involved per year!

#### 4. Project Title: Growing the number of Female ICT for Development Entrepreneurs

The project example expounded on by Jamaica holds much currency for replication across other Caribbean countries. Changes could be made as necessary based on the nuances of each country; however the impactful national socio-economic



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development to be had by empowering more women and involving them in the country’s work force is a well known and researched phenomenon globally.

Objective: Enlist ICT professionals to provide mentorship to grow the number of female ICT for development entrepreneurs across the Caribbean basin

#### Potential Programme Components:-

- Ask the attendants at the Women and Girls in ICT breakfast to assist in speaking with the relevant parties in their countries to model projects similar to that discussed by Jamaica.

- Decide on the project components and structure that would work best for each individual country
- Ensure the focus remains incorporating more self employed female ICT entrepreneurs into the work force, through training and career opportunities
- Incorporate a strong publicity drive so the word can spread and the number of women involved can consequently grow

CANTO is seeking the assistance of all possible stakeholders to chart the way forward towards an inclusive and sustainable Women and Girls in ICTs project. If you have any project ideas, please email [rfraser@canto.org](mailto:rfraser@canto.org). ■■■



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## Demand Grows for Wireless Backhaul via Satellite

Carmen González-Sanfeliu

Regional Vice President, Latin America & Caribbean, Intelsat



The need for mobile bandwidth in Latin America and the Caribbean is increasing exponentially. At the same time, cellular operators are searching for new ways to meet the growing demand for video and data services.

While the amount of fiber coming into the region has risen, it is being matched by the demand for data services – a trend that represents a significant opportunity for satellite. This appears to be the region’s time for an explosion of new data and video service usage via wireless devices.

The region’s market for wireless backhaul via satellite has experienced steady growth and penetration, particularly in rural and remote areas where 2G to 2.5G services have been provisioned.

Universal Service Obligations, as well as saturated urban markets, require wireless telcos to provision 3G and even 4G services in rural markets.

More than ever, major satellite operators are assisting the region’s telcos by providing services that include Internet backbone and instant, middle-mile and last-mile connectivity to local loop capabilities in areas lacking the terrestrial infrastructure to access major fiber routes. These operators provide the satellite links to help telcos complete their service offerings.

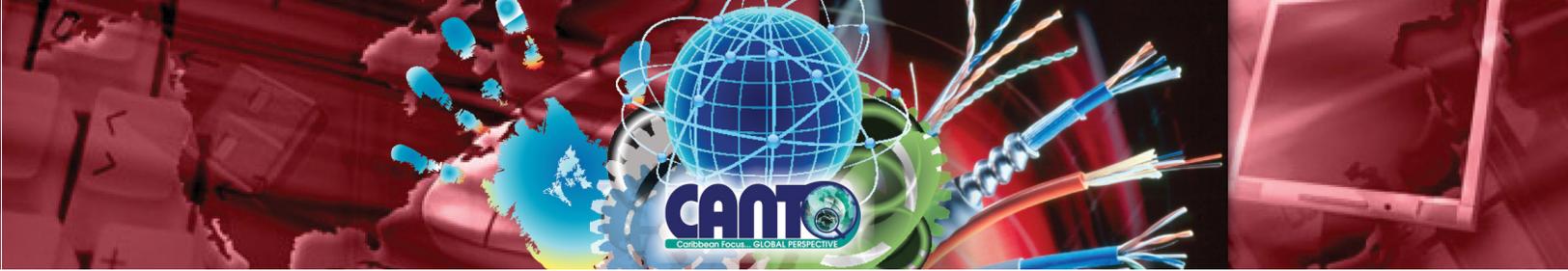
### Expanding Telcos’ Service Offerings

Satellite services help telcos expand their offerings rapidly on a local, national and international scale. Intelsat services, for example, can easily be integrated to complement, augment or extend communications networks.

These services help telcos overcome geographical barriers, terrestrial network limitations and other constraining infrastructural issues. With a robust ground and space network and transmission reliability levels of 99.99 percent, the region’s telcos have long depended on Intelsat to help them deliver uninterrupted service for mission-critical applications.

### Cellular Backhaul Extension

For telcos operating in areas where terrestrial capacity is unavailable, unreliable, too costly or simply not suitable for expansion, leading satellite operators offer viable solutions. For example, telcos now can bypass terrestrial network limitations and expand their wireless networks with Intelsat’s cellular backhaul service. Flexible, scalable and highly reliable, Intelsat’s solution enables telcos to expand



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their coverage and reach more customers. Intelsat supports more than 60 cellular backhaul customers worldwide.

Regardless of which cellular-based service that a telco's customers are using – from domestic and international voice communications, to prepaid accounts, roaming, wireless data, e-mail or Internet access – Intelsat's cellular backhaul service supports it, regardless of the network protocol used.

### Ample Capacity via High-Throughput Satellites

A new development worth watching is the emergence of several High-Throughput Satellites (HTS). These HTS will bring abundant capacity to constrained regions and are promising significantly lower costs for satellite service. This improvement will help enable mobile operators to profitably expand their services into untapped markets.

Intelsat's entry into the HTS category is its Intelsat EpicNG platform. Intelsat EpicNG is an innovative approach to satellite and network architecture utilizing C-, Ku- and Ka-bands, wide beams, spot beams and frequency-reuse technology to achieve a major design breakthrough for increased throughput and performance. This next-generation platform delivers high performance, increased customer control of their offerings and all-region coverage.

Designed as a complementary overlay, Intelsat EpicNG is fully integrated with Intelsat's existing satellite fleet and global IntelsatOne terrestrial network, positioning our customers for operational and business success.

Initially, the Intelsat EpicNG platform will feature two next-generation satellites. Intelsat 29e, scheduled for launch in 2015, will serve the Americas as well as mobility customers in the North Atlantic. Intelsat 33e is scheduled to follow in 2016. Combined, the Intelsat EpicNG satellites will serve every populated region in the world.

HTS delivers higher throughput at lower costs. Across the industry, it's widely expected that HTS will significantly lower the price of capacity. That's important when you consider that it takes much more capacity to backhaul data in contrast to voice traffic. The advent of HTS, combined with highly efficient shared IP satellite infrastructure, makes satellite backhaul of 3G and 4G traffic highly feasible.

Latin America and the Caribbean remain a strategically important market for satellite operators. The influx of new technologies creates more opportunity to develop low-cost wireless voice and data offerings.

Even though other technologies compete with satellite for market share, the growth in wireless penetration is clearly increasing demand for backhaul services based on satellite. ■■■



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## CANTO Caribbean Round Up - June 2013

Jamaica and Cuba made headlines in the last month, while an innovative satellite project took to the skies to provide broadband to emerging markets.

Jamaica's Office of Utilities Regulation (OUR) approved a mobile termination rate (MTR) of J\$1.10 (US\$0.01), down from J\$5, becoming effective July 1 and lasting until June 30, 2018 in a bid to level the playing field in a market where Digicel accounts for some 90% and LIME the remainder.

Digicel and LIME immediately announced they would be slashing their rates for consumers.

And turning up the heat more on its rival LIME, Digicel announced it would be launching a landline network in July using wireless technology to challenge LIME's dominance in that area.

Meanwhile LIME said it was confident it would benefit from number portability, once introduced, by attracting customers from Digicel.

The drafting and publication of number portability rules in Jamaica is expected in July, state minister with responsibility for technology, Julian Robinson said.

A company is due to be selected to manage the number data base by September and testing activities for network readiness will be implemented between September this year and March 2014.

Still in Jamaica, the country's telecommunications minister Phillip Paulwell said that plans to auction spectrum in the 700MHz band for LTE services were "back on track," after the country's Spectrum Management Authority (SMA) delayed the tender in May due to a lack of interest and suspicions that the minimum bidding price of US\$40mn was too high.

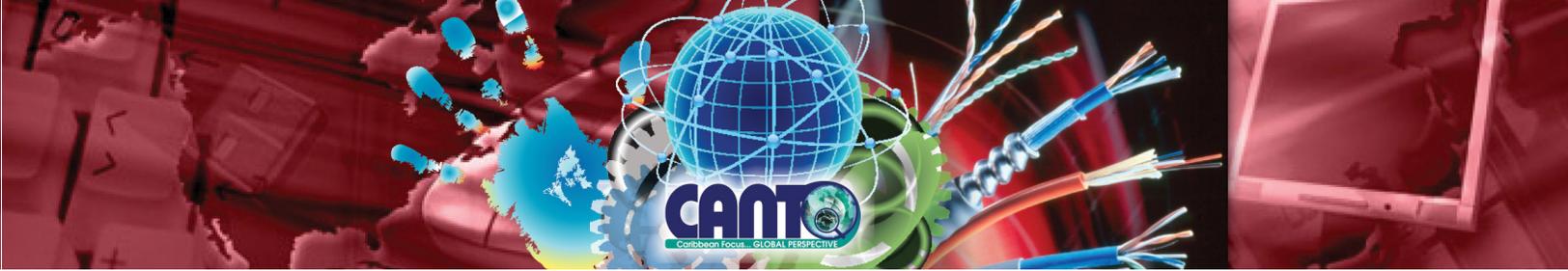
Following a recent trip to China, Paulwell said there had been a positive response in terms of interest in the tender.

### Digicel

Digicel Group posted an 8% year-on-year increase in revenues in the fiscal year ended March 31 to US\$2.78bn. Subscriber numbers rose 1% to 12.9mn across all the company's 30 markets, with growth particularly driven by Haiti, Papua New Guinea, Trinidad & Tobago and Suriname.

Growth in value-added services and data revenues which reached 23% of overall service revenues was supported in part by Digicel's HSPA+ 4G mobile offering. In the last month Digicel launched Haiti's first HSPA+ network, following a similar rollout on St. Kitts and Nevis.

Also in the last month, Digicel finished the second phase of its expansion project in Guyana's Jumbie Creek area in the Potaro-Siparuni region, bringing the company closer to its goal of 98% coverage in the country by the end of the year.



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Despite being the newer entrant in Guyana, Digicel has already exceeded its competitor GT&T’s coverage after only three years of service.

## Cuba

Cuba announced it will begin digital TV tests in Havana using the Chinese Digital Terrestrial Multimedia Broadcast (DTMB) standard and equipment donated by Beijing, while the analog switch-off is estimated for 2021.

Decoders will be donated as part of an agreement signed between the two countries to foster technical cooperation.

Most countries in Latin America have chosen to adopt the Brazilian adaptation of the Japanese digital TV standard, ISDB-T.

Cuban also made headlines announcing unrestricted internet access for the general public via government-owned telco ETECSA’s 118 Internet centers throughout the country as of June

Cubans were allowed access to the Internet for the first time in February of this year. The service was previously provided exclusively to foreigners.

Providing the service has been facilitated by the fiber optic cable connecting Cuba to Venezuela and Jamaica which was activated this year.

Unrestricted Internet navigation will have an initial cost of US\$4.50 per hour, which is still

prohibitively expensive for the majority of Cubans.

Given the country’s economic situation and the investment needed, it’s not possible to offer immediate generalized internet access, the country’s deputy communications minister, Wilfredo González, said.

## Lift Off

A project that aims to provide fast and cheap broadband to billions of people in underserved areas saw the successful launch of its first four satellites.

O3b, whose name refers to the “other three billion” people that have limited or no access to connectivity believes it can provide cheap voice and data to operators by using a novel approach, with spacecraft flying in the medium-earth orbit (MEO) at 8,000km, a quarter of the distance from the earth than is the case of geostationary satellites.

The spacecraft will fly low enough to see latency that can compete with fiber and other terrestrial technologies.

Another four satellites will be launched in September before commercial services begin before year end and another four satellites will follow next year.

Customers already signed up for capacity include Royal Caribbean Cruises, Ozônio



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Telecomunicações for the Brazilian Amazon region, Skynet Colombia for the Colombian Amazon and ISP Quark of Guyana.

### **In Brief**

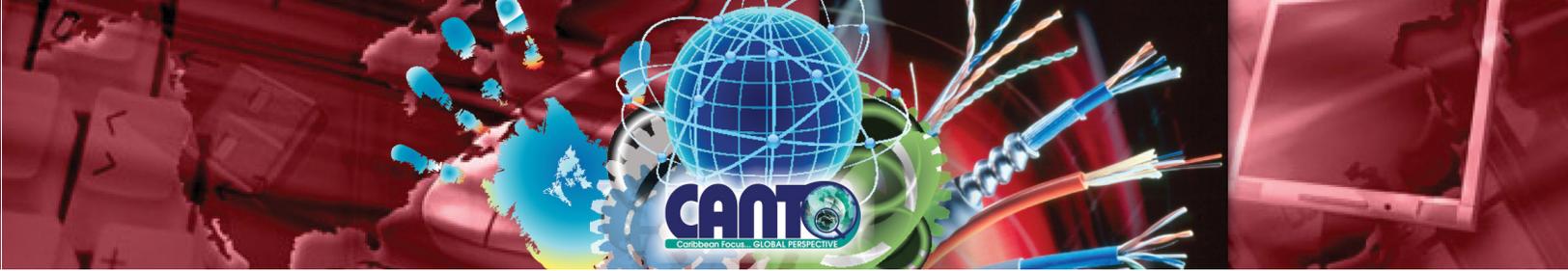
After nearly three years of delays Claro Puerto Rico launched the island’s first IPTV service in 37 municipalities, where it already offers direct-to-home (DTH) TV services.

Cable & Wireless Communications (C&WC) completed the disposal of its 51% stake in Macau’s largest telecoms group, Companhia de Telecomunicações de Macau (CTM), to Citic

Telecom International for US\$807mn. The transaction was intended to improve C&WC’s finances and let it concentrate on its Caribbean and Central American operations.

C&WC’s Caribbean unit LIME has appointed Martin Roos as acting CEO to replace David Shaw.

In February this year, David Shaw decided to step down from his position. parent company Cable & Wireless Communications’ (C&WC) Chief Executive Tony Rice replaced Shaw on an interim basis. ■■■■



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## Matching Regulation to Reality - Keeping Pace

Melesia Sutherland-Campbell, LIME

Telecommunications are an important social and economic force in our societies. It forms the basis of social interactions, drives efficiency and competitiveness in business, and promotes economic growth. Ensuring that telecommunications develop efficiently for the benefit of citizens is a critical task for governments and regulators around the Caribbean, as those that do not keep pace with changing markets damage the competitiveness of their economies.

### Competition is key to successful markets

The current set of regulations, established in the Caribbean some ten years ago, have encouraged investment and promoted competition in the mobile sector and, by all measures, have been a success. They have helped drive significant benefits for consumers, in the form of greater mobile phone ownership, lower prices, and improved service coverage and quality.

Ensuring competition remains efficient is the best way to secure long-term benefits for our countries and consumers. If regulations are no longer aligned with market realities they can damage competition and reduce investment. Periodic reviews of those regulations and policies are, therefore, critical to sustain competition and consumer benefits. This article looks at one area – Mobile Termination Rates (MTRs) – and shows where evidence-based review is, and is not, taking place.

### MTRs are key to sustainable competition

MTRs are the wholesale fee that mobile operators charge other networks to connect incoming

calls. They are central to ensuring a vibrant and sustainably-competitive telecommunications market. Regulators world-wide have long recognized that without regulation MTRs tend to be above-cost which is damaging to sustainable competition and the welfare of consumers, and can result in:

1. High retail prices for consumers
2. Low and sub-optimal usage of networks
3. Inappropriate subsidies from fixed to mobile operators, stifling investment incentives for fiber-based deployment.
4. Retail price discrimination between networks
5. Reduced competition between operators.

### The situation in Jamaica

The Office of Utilities Regulation in Jamaica recognised the harm that can be caused by excessive MTRs and tackled the problem head on. In particular, they had seen the rapid decline of the fixed network which had been subsidising the mobile network and had increasingly fewer revenues to reinvest, and the creation and reinforcement of a dominant mobile provider. In their 30 May 2013 determination, reducing the MTR to J\$ 1.10 (US\$ 0.011), they acknowledged:

*The aim of the consultative process has been to determine cost oriented termination rates for the mobile sector as mandated by the Act. This should facilitate vibrant competition amongst the companies in the sector. Lower MTRs will intensify competition as smaller operators will pay lower termination charges to larger*

*continued on pg.45*

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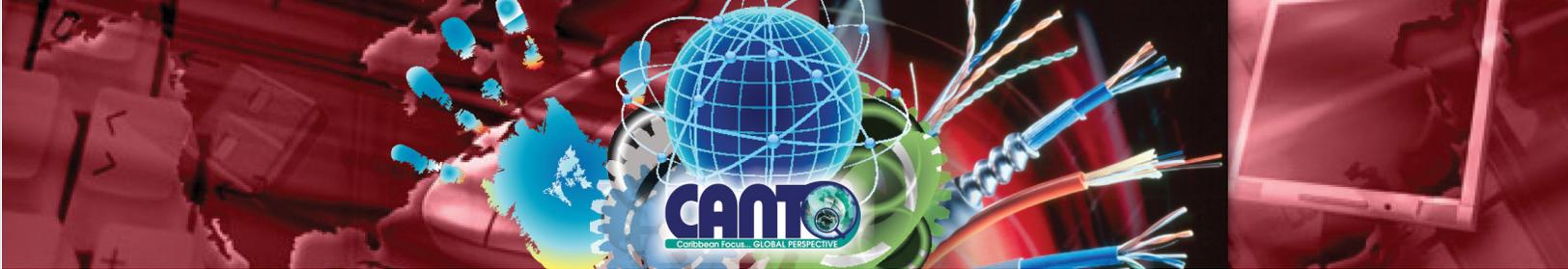
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***operators and thus be able to reduce retail prices and encourage a higher level of mobile service consumption.***

LIME responded immediately by lowering its retail rates by some 64%, and Digicel followed suit shortly thereafter. While the Jamaican market continues to show some structural problems, in particular the persistence of excessive cross-net retail prices, competition has intensified and consumers have benefited.

### The situation in Europe

Several years ago the European Commission acknowledged that MTRs were unacceptably high. In a 7 May 2009 press release, it noted that high MTRs create an indirect subsidy that benefits large mobile operators to the detriment of smaller mobile and fixed-line operators. They also direct funds away from critical investments like upgrades to high-speed Internet networks, and hinder innovative services. The Commission’s recommendations will reduce MTRs to approximately 1.5 to 3 euro cents per minute.

European regulators focussed on MTRs, rather than Fixed or SMS termination rates, as the

large disparity between cost and price created significant market distortions, and stifled retail price competition and investment to the detriment of consumers. Furthermore, as fixed-to-mobile substitution accelerates, it is completely appropriate for fixed line operators to continue to subsidize mobile operators.

### The situation in ECTEL countries:

Like regulators in Jamaica and Europe, ECTEL had recognized the dangers of high MTRs and, in 2008, conducted a public consultation to establish cost-based MTRs, as well as fixed and SMS termination rates. The process resulted in reductions to MTRs over a 3-year period from an average per minute of EC\$ 0.369 (US\$ 0.115) in April 2009 to EC\$ 0.2512 (US\$ 0.093) in April 2011.

Since then, however, ECTEL MTRs have not changed, despite declining costs due to new technologies and increasing understanding that low, cost-based MTRs are essential for effective and efficient competition. With no announced plans to review MTRs, ECTEL is falling well behind regional benchmarks: as Table 1 below shows, all countries except ECTEL have lower MTRs or have plans to reduce or review them.

**Table 1. Regional MTRs over time (in US\$)**

	April 2010	April 2011	April 2012	April 2013
Cayman	0.225	0.107	0.107	0.034
Turks & Caicos	0.150	0.110	0.975	0.085
Barbados	0.128	0.128	0.128	0.128 <sup>1</sup>
ECTEL	0.115	0.093	0.093	0.093
Anguilla	0.111	0.111	0.111	0.093 <sup>2</sup>
Jamaica	0.094	0.094	0.094	0.051 <sup>3</sup>
BVI	0.050	0.050	0.050	0.050



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ECTEL itself recognises that its MTRs are out of line. In a March 2013 presentation at an ITU regional seminar in Mexico, an ECTEL economist noted the average ECTEL MTR is 7% higher than the average MTR of 17 other countries in the region (only two of which were outside the Caribbean). These high MTRs are damaging to investment in essential infrastructure, to competition and to consumer welfare.

### What benefits would lower MTRs bring to ECTEL?

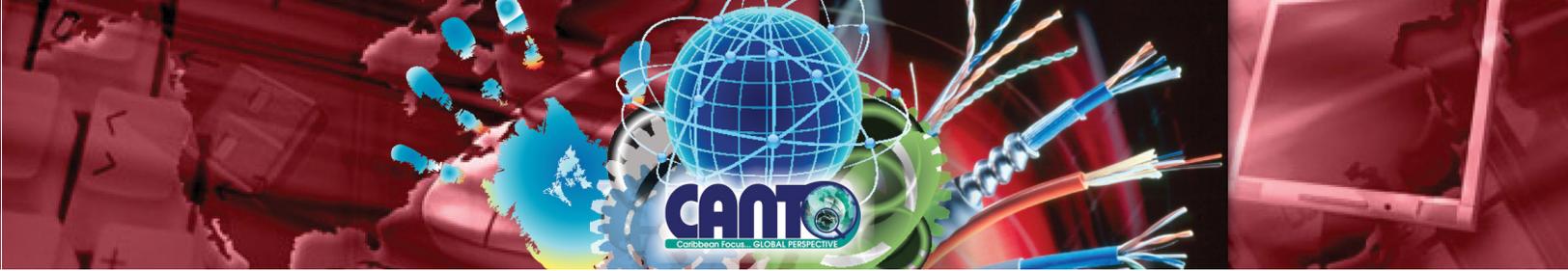
- Customers pay lower call charges: Competition forces efficiency and compels operators to fight all the harder to win consumers’ business. This manifests itself in greater investment, greater innovation and lower retail prices.
- Customers on large networks would call customers on smaller networks: If competition is working effectively, cost-based incentives for operators to charge different on-net and off-net prices decrease with lower MTRs.<sup>4</sup> This improves both efficiency and convenience: consumers are free to call whoever they want at the best prices and do not need to carry more than one phone to call and be called by friends on other networks.

- Greater investment in Broadband infrastructure: Lower MTRs would end or reduce the effective subsidy from fixed to mobile operators, and enable investment in the fixed line and broadband infrastructure essential for the connected society most governments are encouraging.

### What needs to be done

ECTEL, and the NTRCs in the ECTEL countries, have a statutory duty to ensure cost-based MTRs. To satisfy this duty they must immediately commit to review existing MTRs, to apply up-to-date cost information during that review and so determine new MTRs that are truly cost-based. In practical terms, this means a reduction from current rates of around EC\$ 0.25 (US\$ 0.093) per minute to around EC\$ 0.05 (US\$ 0.019) per minute. Without this, ECTEL cannot claim to match its regulations to current market realities. Not only does this mean it is failing its statutory duty but it will also mean consumers in ECTEL do not receive the full benefits of competition.

1. Barbados FTC is constructing a LRIC model which may result in revised MTRs and other interconnection rates.
2. This will fall to US\$ 0.037 in September 2014.
3. This was further reduced to US\$ 0.011 effective 1 July 2013.
4. Lowering MTRs are a necessary but not sufficient condition to reducing the disparity between on-net and off-net calling prices.



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## CANTO Caribbean Round Up - July 2013

### Working to Close the Digital Divide

In the telecoms and IT industry it is common to hear public and private sector officials, academics and others talking about the challenges of narrowing the digital divide.

The First Latin American Regional Telecommunications Congress which took place in Panama City from July 23-26 was no different in that regard. However, delegates agreed to put forth an ambitious program to at least try to identify the conditions needed to generate the necessary investment to make that goal a reality by 2020.

Participants at the congress included representatives of the Inter-American Development Bank (IDB), the Internet Society (ISOC), the Ibero-American association of research centers and telecommunications firms (Ahciet), GSMA Latin America, Latin American internet address registry LACNIC, as well as telecoms ministers from various Latin American countries.

The seven-year target is "ambitious" but "achievable," said AHCIET General Secretary Pablo Bello. The IDB estimates that to close the digital divide by 2020 in the region will require at least US\$345bn of investment in fixed and wireless networks.

Clearly most of that investment will have to come from the private sector but the idea is to create favorable conditions to encourage investment by helping reduce the cost of infrastructure deployment through eliminating obstacles such as excessive taxation.

A fresh look at regulation is also needed especially with regard to spectrum, says Bello.

The countries with the highest levels of investment in telecommunications per capita in 2011 were Chile (US\$69.83), Brazil (US\$63.36) and Argentina (US\$59.94), according to Ahciet. Currently, mobile Internet penetration in Latin America stands at 18%. The aim for 2020 is to raise that to 96%.

### Canto Trade Exhibition

Also in July, CANTO held its 29th Annual Conference & Trade Exhibition in Aruba entitled "Towards a SMART Broadband Caribbean Community." The conference was attended by over 450 delegates including telecoms/ICT ministers, operators, regulators, suppliers and other industry professionals.

The conference included a "Ministers' Monday" on July 15, - a roundtable panel discussion with colleagues from Aruba, Anguilla, Barbados, Bonaire, Bermuda, Grenada, Guyana, Jamaica, Montserrat, Nevis, St. Lucia, Suriname Tortola and Turks & Caicos.

### CTU/CTO MOU

The Commonwealth Telecommunications Organisation (CTO) and the Caribbean Telecommunications Union (CTU) signed a Memorandum of Understanding to assist their stakeholders leverage ICT for social and economic development.



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The CTO is planning to contribute towards CTU activities, including the Caribbean Telecommunications/ICT Ministers Meeting due to be held in the fourth quarter of 2013 and the CTU’s 25th Anniversary Celebrations in April 2014. Moreover the CTO and CTU will consider joint capacity building programmes on a broad spectrum of ICTs.

### Local Content

Part of the challenge of narrowing the digital divide has to do with encouraging greater use of digital tools in a productive manner and that can be helped greatly by more production of local content, according to Rhea Yaw Ching, Corporate VP Sales and Marketing at Columbus Communications.

Columbus recently partnered with BrightPath Foundation, an international technology education non-profit organization, as part of its thrust to help promote training and education in digital content creation.

Speaking at the BrightPath Foundation Youth Tech Camp in Trinidad, Yaw Ching said, “While people in the Caribbean consume a significant amount of content produced outside its borders, they also want to interact with their news, their music, their images, their accents and even their issues in cyberspace.”

### 4G

Cable and Wireless Communications’ (C&WC) St Lucia subsidiary LIME has become the first telco to launch 4G services in the island nation, enabling LIME customers to attain download speeds of up to 10Mbps.

St. Lucia is the seventh C&WC market to upgrade to 4G technology, the others being Panama, the Cayman Islands, the Bahamas, Barbados, the British Virgin Islands and Monaco.

### Cayman Islands

Logic, a telephony and Internet services operator has launched a pay-TV service in the Cayman Islands with an investment of US\$54mn.

The service, which is offered through FTTH technology, will be also available in Bermuda in the short term. Logic is fully owned by KeyTech’s Cayman Islands Communication.

### Orange

French telco Orange is considering exiting mobile telephone and Internet operations in the Dominican Republic with the sale of its local unit, Orange Dominicana, which has a potential value of 675mn-900mn euros (US\$884mn-1.18bn), according to reports. Orange would use the sale to help pay off its 39.2bn euros of debt and make acquisitions in core markets in Europe and Africa. The telecom is in private talks with several banks.

Potential interested parties could include Millicom, Digicel, CWC, and US and Latin American private equity firms.

### Spectrum Auctions

Haiti’s telecoms regulator Conatel will launch a tender for a license to operate a 3G/4G mobile network in the 1900MHz spectrum band.

The spectrum band was previously operated by Haitel, which had its network shut down in April this year after going into receivership with debts of US\$80mn.



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Trinidad & Tobago telecoms regulator TATT said it expects to issue a request for proposals (RFP) for prospective mobile operator license applicants in approximately two months. However, no "meaningful bids" to become the nation's third licensed mobile operator would be received before 1Q14, TATT chairman Selby Wilson was quoted as saying.

### Puerto Rico

Claro and Dish Puerto Rico have partnered up to offer customers on the island bundled telecom services, which include Dish's pay-TV and Claro's Internet, wireless, and telephone services. The team plans to offer the bundle from mid-August. Dish is the only pay TV provider in Puerto Rico to offer more than 100 HD channels. In June, Claro Puerto Rico launched the island's first IPTV service in 37 municipalities, where it already offers direct-to-home (DTH) TV services.

### Jamaica

Jamaica's Office of Utilities Regulation (OUR) is contemplating the addition of a second area code to local phone numbers, potentially bringing them up to 10 digits from seven.

The OUR has already applied to the North

American Numbering Plan Administration (NANPA) for a second area code (NPA), as it is close to running out of telephone numbers.

Irish-owned mobile operator Digicel plans to relocate five top executives from its Jamaican operations to Ireland's capital Dublin. The move is being made to better manage the various time zones across Digicel's 31 markets in the Caribbean, Central America and the Pacific.

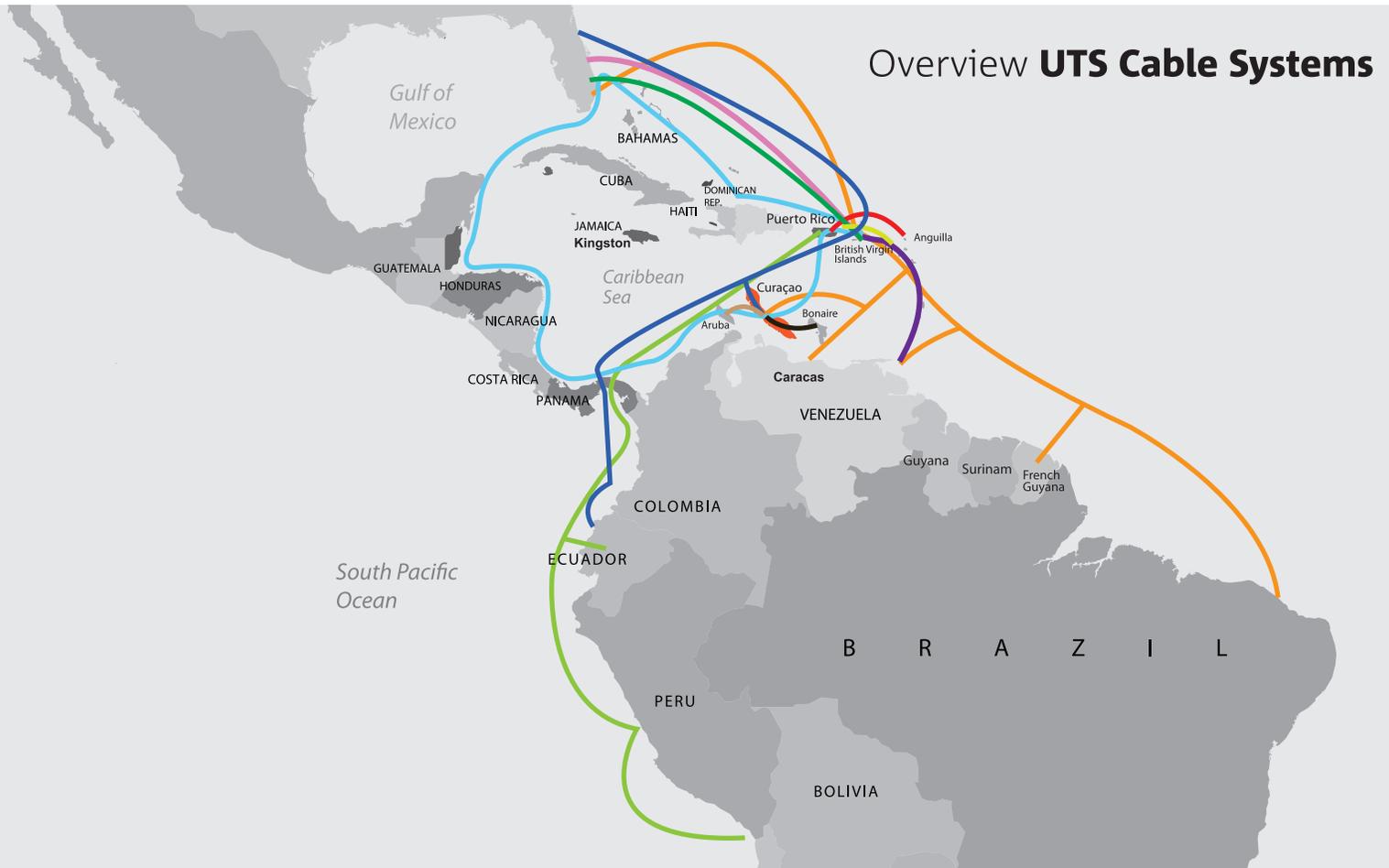
### Guyana

The government of Guyana is to resume talks on liberalization of the telecommunications sector in the national assembly following "fruitful" discussions with current incumbent Guyana Telephone and Telegraph (GT&T).

Liberalization of the telecoms industry has been on the political agenda in Guyana for some time. In August 2011, the government tabled a new Telecommunications Act aiming to open, liberalize and increase competition in the industry, but discussions regarding liberalization ended abruptly in September without explanation.

Digicel has been present as a mobile operator in Guyana since 2006 after acquiring Celstar U Mobile but complains there is not a level playing field given GT&T's monopoly on the long distance market. ■■■■

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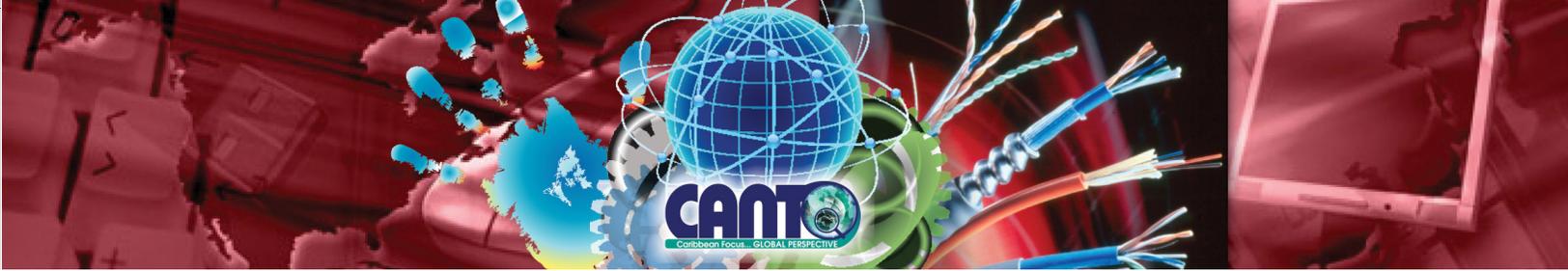
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## Mobile Market Continues to Dominate

### Telecommunications Authority of Trinidad and Tobago (TATT)

Every day we are moving closer to having almost as many mobile- cellular subscriptions as people on earth” so says Brahim Sanou, Director of the International Telecommunication Union Telecommunication Development Bureau, in one of that organization’s on-line articles titled “the World in 2013”.

According to that report, which was printed in February 2013, the number of mobile telephone subscriptions globally was reported to have stood at 6.8 billion, just about four months after the world officially marked the global population reaching 7 billion.

Statistics for Trinidad & Tobago alone are staggering, as at the end of December 2012, the number of mobile subscriptions reached 1.88 million, in a country where the population stood at 1.3 million in 2011. This reflects a 3.1% increase in the number of mobile subscriptions compared to December 2011.

These figures were released in the Telecommunications Authority of Trinidad and Tobago’s (TATTs ) *Annual Market Report – Telecommunications and Broadcasting Sectors January to December 2012*, which is available on its website [www.tatt.org.tt](http://www.tatt.org.tt) TATT is the regulatory body responsible for the development of Trinidad and Tobago’s telecommunications and broadcasting sectors.

The market report, which is published annually, provides information on the performance of key segments within the telecommunications and

broadcasting sectors and zeroes in on prevailing market trends in the following areas:

- Fixed and mobile telephone
- Internet
- Free to Air Radio
- Free to air Television
- Subscription television
- International telephone

The 2012 market report indicates that revenues in Trinidad and Tobago’s telecommunications and broadcasting sectors continue to climb reflecting prevailing global trends, such as faster uptake of mobile services and slower growth in the fixed line telephone market as a consequence of the popularity and accessibility of mobile telephony.

Thus overall, the data shows an increase in revenues in all sectors in 2012. Total revenues for the telecommunications and broadcasting sectors is estimated at TT \$5.3 billion, an increase by 12.6% from the previous year. Of this figure, the telecommunications sector generated revenues totalling TT \$4.4 billion or 82.9% of overall industry revenue. Broadcasting yielded TT \$908.8 million or 17.1% of the overall industry revenue.

It should be noted that the TT \$5.3 billion<sup>1</sup> or US \$834.1 million<sup>2</sup> generated by both sectors in 2012, equates to 3.3% of this country’s Gross Domestic Product.

1. This Figure includes revenues from telecommunications and broadcasting services offered to members of the general public and private leased line services.

2. Estimated exchange rate US\$1=TT\$6.37



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This steady growth in the local telecommunications and broadcasting sectors is taking place against the backdrop of a volatile global economic environment.

However, while there may have been anticipation that this environment would have somewhat impacted Trinidad & Tobago’s growth thrust, in his 2012 budget presentation, Minister of Finance, Senator Larry Howai revealed otherwise. He noted that after three (3) years of negative or negligible growth during the period 2009-2011, Trinidad & Tobago’s economy reached a turning point in 2012.

Growth he said “is expected to be in the vicinity of 1.2 %. The return to economic growth in 2012 is anchored on the improved performance of the non-energy sector”.

The telecommunications and broadcasting sectors is one component of the non-energy sector described as “burgeoning” by Dr. Ronald Ramkissoon during an address at one of TATT’s ICT Open Forums. Commenting on the performance of the sectors during 2012 he added “we have come a long way from when the state was the primary provider of telecommunications and broadcasting services”. Dr. Ramkissoon credited the liberalization process undertaken by TATT for the current success of the sectors over the last nine years.

Revenue increases are indicative of subscription increases which took place across both sectors during the period under review. While there was an expectation of increases in subscriptions in the mobile market due to global trends, there were also increases in the Internet and subscription television markets.

It is anticipated that over the next three year period the markets will continue to experience growth as TATT embarks upon a number of initiatives that would deepen competition, strengthen infrastructure and keep this country abreast with international trends. These initiatives will be documented in TATT’s 2013 to 2016 strategic plan which is currently being finalized. Some of the initiatives include:

- Strengthening of the regulatory framework including amendments to the Telecommunications Act
- Engagement of a third mobile telephone provider
- Establishment of number portability
- Strengthening TATT’s human resource capital

All of these initiatives, TATT is confident, would redound to the benefit of the average consumer of telecommunications and broadcasting services. ■■■■



*"Towards a SMART Broadband Caribbean Community"*

## CANTO Caribbean Round Up - August 2013

Cable & Wireless Communications (C&WC) saw some growth in mobile and broadband subscribers in its Caribbean and Panama units in the three months ending June 30 however market conditions in the Caribbean still "remain difficult," particularly in the Eastern Caribbean and Barbados, said in an interim management statement.

C&WC, which operates in the Caribbean as LIME, saw a 4% drop in revenue in its financial year ending March 31 to US\$1.94bn, as declines in voice and a struggling Caribbean economy weighed. However, C&WC said it is seeing the fruits of its cost reduction and restructuring plan announced last year with OPEX in the Caribbean down 5% against Q1 in the prior year.

In that vein, LIME Barbados announced that 200 employees would be let go at the end of September mainly from the service and customer support teams.

C&WC has said that its renewed focus on the pan-American region following plans to sell off its Monaco & Islands and Macau businesses, has accelerated investments in mobile broadband.

The company announced in August it is due to become the first operator to launch LTE both in the Cayman Islands and in the Bahamas this year and is seeking to acquire additional spectrum. In July, LIME became the first operator to launch 4G/HSPA+ services in St Lucia.

### **In other news:**

#### **Bahamas**

On the issue of spectrum, The Bahamas Investment Authority (BIA) said it is currently reviewing applications from several companies looking to provide wireless services in the country, when the sector is liberalized next year. Only Digicel Group was mentioned.

#### **Puerto Rico**

In Puerto Rico, AT&T launched LTE services in Jayuya. Also, local telcos Claro and DISH launched a bundled services offering on the island including pay TV, broadband and voice.

#### **Cuba**

And talking Internet, more than 100,000 Cubans have signed up to use Internet services since June 4 when the government lifted restrictions on Cubans accessing the web, according to state telco ETECSA. Internet must be accessed via ETECSA's network of 118 Internet centers throughout the country.

Until February of this year, Internet access was available only to foreigners. The provision of the service was made possible due to the fiber optic cable connecting Cuba to Venezuela and Jamaica which was activated this year.



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## Roaming

Mobile operator Digicel has agreed to eliminate roaming charges for its customers within the 15 Caribbean nations known as the Caribbean Community, or CARICOM. After negotiations with the Caribbean Telecommunications Union (CTU), each travelling subscriber will be treated as if he is using his local/domestic Digicel network throughout the region. The changes will take effect on October 1, 2013.

Moving on to ICT, the Caribbean’s largest furniture, appliance and electrical company Unicomer, which trades as Courts, has signed an agreement with Digicel’s business communications unit to implement a unified communications and contact center solution. In related news, Digicel Business said it had achieved a customer satisfaction excellence Gold Star from Cisco recognizing customer service across the Caribbean, Panama, and El Salvador.

## Grenada

Grenada’s government is considering turning to Trinidad & Tobago for help establishing a state ICT company to improve efficiency in delivering government services. The Grenadian company would be based on Trinidad and Tobago’s state ICT firm, iGovTT. iGovTT is a special purpose enterprise which develops and deploys advanced ICT solutions for the Trinidad & Tobago government, such as ttconnect, which provides online access for local citizens to government information and services.

## Curaçao

Also helping ICT development in the region is the Caribbean Telecommunications Union (CTU) which along with Bureau Telecommunications and Post (BTP) will hold a Caribbean ICT Road-

show and an Internet Governance Forum from September 9-11 in Curaçao. The Caribbean Roadshows are an initiative of the CTU and promote the use of ICT for the development of governments, businesses and citizens. The event was previously held in Curacao in 2009. The three-day program will focus on areas including e-commerce, e-health, e-government, e-education, cyber security and social media.

## Jamaica

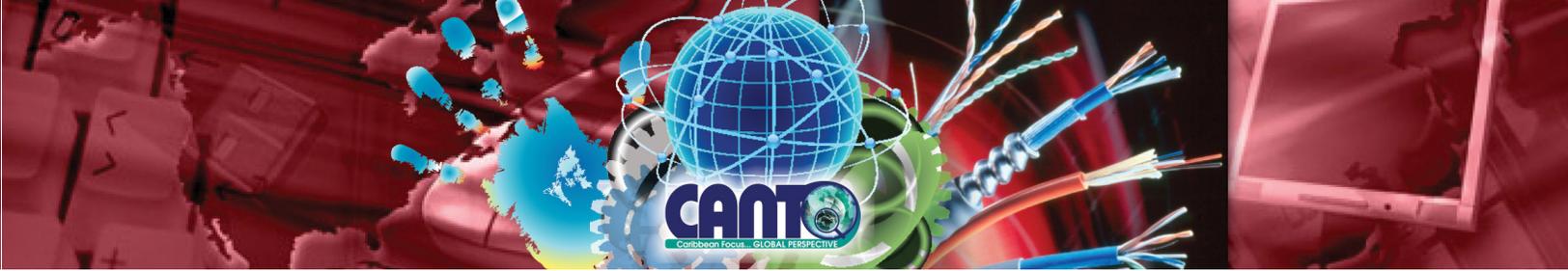
In an attempt to kick start the economy the Development Bank of Jamaica (DBJ) and Inter-American Development Bank (IDB) have signed an agreement under which the IDB will provide US\$150,000 through the Multilateral Investment Fund (MIF), for the development of the Jamaica Venture Capital Program (JVCP). The DBJ will provide counterpart funding of US\$128,000. IDB Jamaica country representative Gerard Johnson said the agreement was a timely initiative given the challenges faced by the debt-ridden Jamaican economy. The JVCP is to be launched on September 9, during a conference hosted by the DBJ in New Kingston.

## Haiti

In Haiti, technology investment holding Altnet Systems announced that TchoTcho Mobile, the mobile money platform of Haiti’s leading telephone company Digicel, has migrated to Utiba’s Mobility platform. The migration includes standard mobile financial transactional services, such as person-to-person and person-to-business payments; agent management; as well as bill payments and international remittances.

## Barbados

Enterprise software solutions firm Epicor Software announced that the largest credit union



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in Barbados BPWCCUL selected the Epicor ERP and Epicor human capital management (HCM) solutions to streamline complex financial back office operations and HR processes. BPWCCUL selected Epicor HCM to automate HR processes, enabling the organization to track, manage and analyze employee data throughout the employee lifecycle.

### Caribbean

Digicel has chosen US telecoms software firm NAAP Global Solutions to provide asset management software for its operations in

Martinique, Guadeloupe and French Guiana. The multi-modular asset lifecycle software will help Digicel improve operational efficiency and reduce costs by maximizing the tracking and management of 350 telecom sites.

The solution will also enable an inventory of over 50,000 installed telecoms assets, barcoding and high definition 3D laser scanning, said NAAP.

The advertisement features a woman in the foreground on the left, smiling and talking on a mobile phone. In the background, a blue airplane is flying over a cityscape. The overall theme is business travel and connectivity. The text is in blue and grey, with the LIME logo in white on a black background.

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