



**Trinidad and Tobago
Internet Governance Forum (TTIGF) 2018**

Shaping the Digital Future

**January 26th, 2018
Trinidad and Tobago Chamber of Industry and Commerce
Port of Spain, Trinidad and Tobago**

Overview

The second annual **Trinidad and Tobago Internet Governance Forum (TTIGF)** took place on January 26th, 2018, from 9AM to 5 PM at the Trinidad and Tobago Chamber of Industry and Commerce, Westmoorings, Trinidad and Tobago. The theme of the TTIGF for 2018 was “Shaping the Digital Future.”

There were 89 face to face attendees including panellists, special invitees and TTMAG Directors, and 358 views of the livestream via YouTube.

The structure of this report follows the format of the TTIGF 2018 event, with four sections:

- Introduction and Opening Remarks
- Panel Discussion
- Open Forum
- Conclusion

Hosts

TTIGF 2018 was hosted by the Trinidad and Tobago Multistakeholder Advisory Group (TTMAG). TTMAG’s mission is to be an independent entity for the promotion and development of best practice policy standards for the .tt country code Top Level Domain (ccTLD) and the local Internet ecosystem in the interest of the Internet Community.

The TTIGF would not have been possible without the support of its strategic partners: AVIT Ltd., International Telecommunications Union (ITU), Internet Governance Forum Support Association (IGFSA), Internet Society Trinidad and Tobago Chapter (ISOC TT), Trinidad and Tobago Computer Society (TTCS), Latin America and Caribbean Network Information Centre (LACNIC) and the Trinidad and Tobago Network Information Centre (TTNIC).

Resources

TTIGF

Website: <http://igf.tt>

Email: ttigftt@gmail.com

[Twitter](#), [Flickr](#), [YouTube](#)

TTMAG

Website: <http://mag.tt>

Email: info@mag.tt

[Twitter](#), [Facebook](#), [Instagram](#), [Flickr](#), [YouTube](#)

Introduction and Welcome Remarks

To open proceedings, [TTMAG chair Dev Anand Teelucksingh warmly welcomed both in-person and online participants and delivered a brief address](#), introducing the three themes of TTIGF 2018, namely Digital Financial Services, Gender Activism Online, and Blockchain, while highlighting the achievements of the TTMAG in the year since the first TTIGF, which took place on January 26th, 2017.

Watch welcome address by TTMAG chair, Dev Anand Teelucksingh : <https://youtu.be/x-jEmKzyGQk>

Next, [TTIGF 2018 received recorded welcoming remarks from global Internet governance leaders](#) including:

- Ms. Lynn St. Amour, Chair of the Multistakeholder Advisory Group of the Internet Governance Forum (MAG)
- Mr. Chengetai Masango, UN IGF Secretariat
- Mr. Markus Kummer, Internet Governance Forum Support Association (IGFSA)

Watch welcoming remarks from global Internet governance leader: https://youtu.be/myU12_h-Os

Keynote Address



Keynote speaker Mr. Shola Taylor, Secretary General, Commonwealth Telecommunications Organisation.

The keynote address of TTIGF 2018 was delivered by Mr. Shola Taylor, Secretary General of the Commonwealth Telecommunications Organisation. In his address, he shared his enthusiasm for the TTIGF 2018 and congratulated the TTMAG for organising it. He continued by acknowledging the growth and development of ICT in Trinidad and Tobago, as well as the fact that the country is an active participant in the CTO, which T&T presently chairs.

In respect of the themes of TTIGF 2018, Mr. Taylor made a number of observations. On Digital Financial Services, he said they have the potential to offer inclusion to unbanked and underbanked populations around the world, and offered the example of micro-lending which has proven successful in many territories. Regarding Gender Activism Online he indicated that the CTO has not been active on this issue though it is of course supportive of many initiatives in this vein. On Blockchain, he highlighted the use of blockchain for land registries, as well as smart contracts, and drew attention to the potential for empowering users, and the possibility of transaction data that is complete and accurate. As a general point, he said that technology frequently develops at a pace that regulators cannot necessarily match, and that many opportunities exist beyond what we currently see.

Mr. Taylor went on to make reference to the principles espoused at the Commonwealth ICT Ministers' Forum 2014, including: contribution to a safe and effective global cyberspace; actions in cyberspace supporting broader socioeconomic development; collective action to solve cybercrime; and the exercise of rights and meeting of responsibilities in cyberspace. He also made mention of the role of the CTO in Trinidad and Tobago, recalling the Human Resource and ICT Forum in 2017 that it hosted with the help of the Caribbean Telecommunications Union (CTU), which examined the unique HR needs of the ICT sector and attempted to come up with solutions to present challenges. Additionally, he discussed briefly the consultations on over-the-top (OTT) services hosted with the Telecommunications Authority of Trinidad and Tobago (TATT).

Moreover, regarding the status of ICT in Trinidad and Tobago, Mr. Taylor summarised the three most critical thematic areas as follows: ICT skills, uptake of e-services, and the legal and regulatory framework for ICT. He went on to identify existing challenges in respect of each area. Finally, he addressed some of the prerequisites for a thriving digital economy and society, including data protection and privacy; new technology and the need for policy and regulatory action in the areas of gender, climate change, disaster resilience and risk reduction; ease of doing business, and creating an enabling environment for new forms of communication, including for machine-to-machine (M2M) communication; cybersecurity; the application of ICT in the agricultural sector; stakeholder participation: ensuring that everyone is part of the discussion in ensuring that ICT is a high priority for T&T; and accessibility, accountability and trust for e-government service take-up. Mr. Taylor closed by reaffirming the importance of the multistakeholder model.

Watch TTIGF 2018 keynote address by Mr. Shola Taylor, Secretary General of the Commonwealth Telecommunications Organisation : <https://youtu.be/S5LAzKxmA8A>

Digital Financial Services

Moderator : Rabindra Jaggernauth – Director, TT MAG

Panellists

Zaf Rahaman – Owner & Founder, Forward Multimedia

Glynis Alexander-Tam – General Manager, InfoLink Services Ltd

Aldwyn Wayne – CEO, WiPay

Shernon Osepa – Manager, Regional Affairs, Latin America & Caribbean Bureau, ISOC

Watch Digital Financial Services Panel Session: <https://youtu.be/fPpdV7Ms5Es>



Digital Financial Services panel (L to R): Mr. Rabindra Jaggernauth (moderator), Mr. Zaf Rahaman, Mrs. Glynis Alexander-Tam, Mr. Shernon Osepa, and Mr. Aldwyn Wayne.

Introduction

The moderator for this session, Mr. Jaggernauth, began by welcoming the panellists and introducing the topic of discussion. He defined digital financial services (DFS) as “a broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances and insurance.” He went on to say that DFS concept includes mobile financial services (MFS). He then introduced the panel session format, whereby there would be a discussion for 45 minutes followed by a Q&A session addressing questions from both live audience as well as remote participants.

Mr. Rahaman introduced himself as a web developer involved in building e-commerce websites, and said he saw his role on the panel as combatting much of the misinformation that exists in Trinidad and Tobago regarding payment options and e-commerce in general, based on his experience in the industry. Mrs. Alexander-Tam introduced herself in her role of running the LINX payment network, which has a network of 500 ATMs and almost 20,000 point-of-sale machines in Trinidad and Tobago. She described LINX as legacy payment infrastructure. She also alluded to the 200,000 credit cards that currently exist within the country, as well as the need for significant growth in electronic and digital transactions in Trinidad and Tobago, referring to a study by MasterCard in 2016 that projected that a growth in electronic transactions by 30% would lead to a 3.5%-4% increase in this country's GDP.

Mr. Osepa's introduction focused on the development of the Internet generally, the need for infrastructure and legal development, as well as attention on the security of transactions. Mr. Wayne described his and his company Wipay's role as bringing many of the ideas discussed by the other panellists into reality. He described the company as a payment processor that allows for online payments with or without a credit card, and highlighted the growth of Wipay's user base, to 10,000 sign-ups within 6 months, mostly from entrepreneurs.

Benefits of DFS

The panel went on to discuss some of the tangible benefits that consumers and entrepreneurs would experience from getting involved in DFS. Mr. Rahaman responded by describing the landscape in 2011 where only one bank had a payment gateway working through a Bermudian financial services company (First Atlantic Commerce). By 2013 another bank got involved in offering e-commerce solutions, and PayPal became available in Trinidad and Tobago, though with some significant limitations. The cost of accessing e-commerce services was quite high at the time, roughly US \$1800 to set up the payment gateway with FAC, and this was especially burdensome for small and medium-sized enterprises. Around that time, the local business community was just becoming sensitised to the fact that a website was simply a standard requirement of a modern company, and was just beginning to learn more about e-commerce. Now, in 2018, there is greater uptake of e-commerce, all the major banks in the country offer some form of e-commerce solution, and with the advent of WiPay, there exists a local payment aggregator to simplify the process further.

Mrs. Alexander-Tam identified the benefits of DFS by reference to the costs and risks of carrying cash. Businesses realise the huge expense of securing cash on their premises, with armed security carrying a very significant cost. So to become more efficient in enterprise, DFS would certainly appear to be one way to go, though there would also be a need to encourage a change in behavior and practices among the

population to engage in electronic transactions. The competition to the LINX system is not credit cards, as is popularly thought, but cash. There is a pent up demand in the population for DFS, and as more entrepreneurial efforts such as WiPay come on stream, the cost of accessing these solutions should come down so that they become more widespread.

Mr. Wayne described his experience in first-world countries and the range of payment options for goods and services as a motivating factor in building WiPay. Then the company looked at what exists in the local environment, cognisant of the fact that it is a cash-based culture, so they did a hybrid approach using both credit cards and a familiar medium for digitising cash, similar to topping up a prepaid mobile phone or using prepaid gift cards. So anyone who has access to cash can now participate in digital commerce. From the perspective of economic development, Mr. Osepa said that just over 3 billion of the 7 billion people on Earth are connected to the Internet, and only 1 in every 5 people has access to banking services. Therefore, to generate greater inclusion in DFS, there is a significant opportunity in getting the remaining people online, as if people are not connected to the Internet then they cannot take advantages of all the benefits being discussed. The focus of the Internet Society is therefore to get people connected to the Internet. Regarding DFS specifically, he said it is important to involve consumers, service providers, and governments in the process of designing national systems for moving DFS forward, as governments will be the ones drafting legislation and policies in a given country.

Expanding the Range of Financial Services

Mr. Jaggernauth posed a question regarding the additional services that both legacy providers and new entrants to the DFS space could offer to consumers. Mrs. Alexander-Tam identified education as a critical additional service, which involves sensitising providers to responsibility of offering or participating in the digital financial services space, as the spectre of fraud and misconduct always hangs over new financial products and services, with nefarious actors continuously trying to exploit loopholes and backdoors, and regulators struggling earnestly to keep pace. Security is also extremely vital, as breaches compromise the integrity of financial systems and ultimately break down the level of trust in the system, leading to eventual collapse. In order for a system to grow, its integrity must be guaranteed.

On the other hand, consumers must also be educated, as it is still the case that many consumers fall for simple phishing tricks, e.g. giving their PIN to fraudulent actors online, over the phone, or via text message. Security breaches erode any sort of branding being done for a particular service. In the example of LINX, there is a benchmark in the form of Canada's Interac network that was a useful model in the

early days of building the local system. Further improvements such as peer-to-peer payments, contactless payments, etc. would serve to improve efficiency and productivity in the society.

Using FinTech to Overcome MSME Challenges

The moderator posed a question to the panel regarding whether new DFS technologies can help micro, small and medium-sized enterprises (MSMEs) to overcome some of the onerous requirements that they currently face when trying to access services from banks. Mr. Wayne responded, also addressing the issue of security, by saying that it is important for emerging fintech companies to partner with legacy financial services companies to overcome some of the initial resistance people may have in switching to new systems - in many instances the legacy companies would have done the legwork to build trust, and new companies can work on onboarding customers, as well as ensuring all-important regulatory compliance. He also addressed the point of educating consumers by referring to the partnership WiPay has with Massy Stores, to do self-checkout, which was marketed as a simple and convenient solution without mentioning the underlying technology which might confuse customers.

Q&A

Regarding the statistics Mr. Osepa cited on the number of persons connected to the Internet, is there anyone who knows the relevant numbers for T&T?

Kwesi Prescod, Independent Consultant: Based on TATT's most recent data, for September 2017, household broadband penetration (1MBps and above) was 58%, down from 64% a year before. Further information is available at tatt.org.tt.

SO: We should not fool ourselves about the definition of broadband, as 2Mbps and above.

KP: No policymaker wants the definition of broadband to be at a low level, but the regulations stipulate it as such. Otherwise, some of the existing networks that firms in the market operate would be rendered illegal.

How much does government use DFS? Are you as practitioners seeing progress with the Ministry of Finance being more open to this?

RJ: Even in the absence of legislation, it is still possible to do a lot in this space, as there is much to be done. Anytime the Ministry of Finance makes presentations on this area, I tend to leave the meetings disheartened. Little progress has been made since the early 2000s.

ZR: There are no more real stumbling blocks to e-commerce in Trinidad and Tobago, as we have payment gateways, a lot of infrastructure needed to sell online, but there is a mindset problem and resistance to change.

Question from the Online Audience: What are the panel's thoughts on mobile payments, e.g. Samsung Pay, Apple Pay or Google Pay?

AW: We like the fact that we can use technology to help ease transactions for customers. Alibaba, the Chinese company, launched 'Pay With a Smile' at CES 2018, and WiPay is trying to emulate that, reducing the friction of using digital payments.

Question from the Online Audience: Why can the LINX system not do online payments, and why should we be using Mastercard and Visa?

GAT: The challenge is that LINX is owned by four banks, and all four have to agree on building a network of that nature. It has been asked for before, and it is not in the strategic mission of the organisation, based on its ownership.

I'm looking for a discussion on regulation of the technology. Merchants often abuse the LINX system, e.g. refusing to allow LINX payments for bills under TTD \$20. How would such abuse be addressed?

GAT: In focus groups, we've seen that merchants used to refuse LINX for \$10 and under, now it's gone up to \$20. The merchant's relationship is with their bank. When they sign the agreement, there are supposed to be no floor limits, and no surcharging (charging extra for using electronic payments). Customers can report the merchant to InfoLink's Facebook page, and they can report the infringements to the banks. Regarding regulations, you cannot wait for regulations to build the technology - in other countries, technology is built and regulation follows behind. Once the technology has a proper relationship with the banks, for taking care of Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements, as well as repudiation and chargebacks, for when customers find something wrong with the transaction. The customer experience needs to be a good one, so the entire value chain has to be mapped for the online space in order to build trust in the process and thereby achieve that.

Why aren't peer-to-peer payment apps such as Venmo, or similar, coming to Trinidad and Tobago? Is it a legislation issue?

GAT: It is a matter of combating fraud. Currently, persons are flown into Trinidad to commit ATM fraud, and the regulators and banks are taking this very seriously. However, once this is worked out, peer-to-peer payments are in the pipeline.

Question from the Online Audience: Is there a concern over the use of prepaid gift cards for money laundering?

AW: The Central Bank has guidelines around prepaid cards, with limits on how much you can load on a card as well as how often you can reuse them, and this is an AML requirement.

As a user of the Automated Clearing House (ACH) facility, splitting of payments of salaries to credit cards is not facilitated. Is this a deliberate action or can it be fixed?

AW: That is an issue with the particular bank you interface with. For example, JMMB allows this facility.

Comment: You can do e-commerce for free in Trinidad and Tobago. WordPress, WiPay, WooCommerce, etc. all have free tiers. We need to spread the message wide and far.

Gender Activism Online

Moderator

Ms. Jacqueline A. Morris - Director, TT MAG.

Panellists

Mr. Ian Royer – Social Media Consultant, Anansi Tales Marketing

Mr. Rudolph Hanamji - LGBT Activist

Ms. Attilah Springer – Gender Activist

Dr. Sue Ann Barratt – Lecturer, Institute for Gender and Development Studies, University of the West Indies (UWI)



Gender Activism Online panel (L to R): Ms. Jacqueline A. Morris (Moderator), Mr. Ian Royer, Ms. Attilah Springer, Mr. Rudolph Hanamji, Dr. Sue Ann Barratt.

Introduction

The second panel session on *Gender Activism Online* began with the moderator, Ms. Jacqueline Morris inviting each panellist to give an insight on their personal experience that led to their participation in online activism. The panel held a lively discussion as they recapped several social issues in which online activism sparked a change in government's decisions, increased general social awareness on the issue, or led to changes in cultural norms. They discussed the benefits and challenges of online activism, as well as the responsibility involved. They also discussed the importance of a holistic approach in following through with online activism in order to gain traction for one's movement, and to gain effective long-term results.

Online Activism in the Local Context

Ms. Springer recalled that her participation in activism began in 2005 with her involvement in the [anti-smelter campaign](#) which built solidarity within and outside the shores of Trinidad & Tobago through online information-sharing. The Internet was used to document the [experiences of the Chatham community](#), to educate and raise awareness of the environmental consequences of the proposed aluminum smelter project. This led to the company Alcoa receiving a strong backlash from the public, as well as a change in the Government's plans in respect of the smelter. The story received viral coverage and was even headlined in an Icelandic newspaper. The panel agreed on the basis of this story, that people power should never be underestimated, and reaffirmed that motivated citizens can use the Internet to lobby to bring about change in the country.

The [removal of former Port of Spain Mayor Raymond Tim Kee](#) was another issue in which Facebook was used to consolidate opposition to his remarks. This followed by a [physical protest](#) showed how the people can impact and hold accountable those in authority. This action began with the update of a Facebook status which led to a [Change.org petition which gained over 10,000 signatures in mere minutes](#).

Mr. Rudolph Hanamji shared his online activism encounter which began with his involvement in a United Nations (UN) project on HIV awareness. Dealing with issues that were not mainstream called for the use of social media and exposed him to the available resources of the UN. He became a poster boy for a movement and unbeknownst to him gained him great popularity in many places. This totally unplanned social activism led him to his studies in Communication at the University of the West Indies (UWI), as he truly saw the power of the Internet and its reach.

Even in Mr. Hanamji's political career during his time with the Congress of the People (COP), he recalled the invisible success of the use of social media to help the marginalised. He recapped that the already disempowered group, poor young black males, were going to be further targeted by a proposed bill which gave the Army the power of arrest. Social media was used in these communities to break down the message and demonstrate to the youths to help mobilise and aid in their understanding of the impacts. Resulting from this, it educated and also gave a sense of empowerment to the affected citizens. Their sentiments were captured and replayed to the relevant authorities, this assisted in consolidating a stance for COP MPs against that bill.

The Value of Activism

The panel commented on several other social issues and campaigns/groups such as Life in Leggings, Black Lives Matter, Womantra, and Leave Me Alone, which received

international press coverage. The panel agreed that hashtags, for example, now allow one to spread a message in a different and more powerful way, as going viral gives movements power and allows for quick mobilisation of calls to action.

Dr. Sue Ann Barratt commented that social inclusion is facilitated by online activism and this redefined opportunity allows the public's views on issues to be more directly considered, thus having a stronger impact on the decisions taken and potentially making certain political processes more democratic. She said that online activism gives people a voice and allows them to express themselves against various cultural barriers and the taboos of society.

She added that shared experiences via social media allow for a global recognition of commonly faced issues. Telling stories helps one to become stronger, helps one to find people with similar stories, creating communities of interest and increasing global consciousness, while also allowing one to contradict, compete and challenge ideas through research and debate.

Social Media

Mr. Royer stated that approximately 25% of Trinidad and Tobago's population can be found on Facebook or Instagram. Facebook is now becoming the social media platform of choice for the older generation whereas Twitter, Snapchat and Instagram are more popular among the younger cohort.

He said that creativity drives social media and it is important to be cognisant of how the tools are used to build momentum for social movements. He furthered his point by stating that, once managed correctly, social media can be used to harvest data that can provide meaningful information to actors seeking to understand the political system in Trinidad and Tobago. It is therefore able to contextualise cultural ties and make the demands of the population known to political parties, especially around election campaigns, when politicians are attentive to voters' concerns.

The Role of the Activist

An important point raised by Ms. Springer was the need for activist responsibility. She stated the need for activists to be introspective on the issues being ventilated on to ensure the manner of activism is not one of "tragedy porn", which re-stimulates trauma and tragedy without providing solutions.

Ms. Springer also stated that being an activist requires strength to withstand the public backlash and the threats that follow from taking often controversial or unpopular stances. Dr. Barratt added that the role of an activist necessitates a strong mind & heart as the work required to drive an issue to the centre of debate, even as the

backlash mounts, is of paramount importance, especially as one must expect purposeful and coordinated attacks to try to demotivate the activist, especially as it relates to issues affecting marginalised groups in society, such as women, the LGBT community, etc.

Mr. Royer explained the importance of understanding the difference between activism and advocacy, and knowing one's role between the two. At the same time, he highlighted the importance of activists knowing when to transfer an issue on to advocacy. Mr. Royer hailed the remarkable achievement of the Internet and social media in bringing interest groups together across genders, ages and other demographics. He emphasized the strategic importance of learning how to monetize activism in moving forward.

The consensus held by the panel was that online social activism creates global communities based on shared experiences. It builds solidarity and can invoke change once managed correctly. It was noted however that social work cannot be replaced by the click of a button. The call for action goes beyond a 'like' or comment and thus raising awareness of an issue can evoke many online responses but there is also a need for the organized effort to consolidate a physical response and this cannot simply be replaced as the online never disconnects from offline.

Q&A

Can you discuss the pros and cons of meme culture in online activism?

SAB: Memes are powerful, little messages. They are short, snappy and used to get some emotive response. Once used effectively, it is a tool to quickly engage the public. It is important to remember however that the culture of our society responds quicker to visual than text and we also live in a culture of satire and picong one has to be mindful when memes become personal and the very same features are used to undermine characters.

IR: Overall memes can be effective however one needs to meme responsibly. Problems arise when memes become personal. Trinidad and Caribbean culture responds visually, so memes are very powerful in our context.

Do you think there is a space to use apps in such a way to promote activism?

IR: There is definitely a space for this in the Caribbean one needs to bear in mind however that apps can be expensive. There is a need to ensure the apps are purposeful and runs a reward mechanism.

Transitioning from social media to real world can be difficult, what's being done to get that follow through aspect and also to ensure that activism continues?

SAB: There are activist recruitment camps. Also self-marketing your stance taken on issues or showing your support by, for example, wearing campaign T-shirts and other items helps one to transition online to real world support, through being actively involved and not just limited to online space.

IR: It is human nature to seek self-interest. It is therefore important to show that there is a special unique selling point in being an activist. Trinidad and Tobago is particularly an academically-driven society, but showing tangible work experience in activism can supplement one's credentials in entering the labour market.

JAM: Not only that, but one can make connections and find one's passion through activism.

AS: Activism is also about training yourself out of a job. If the goal of the movement is achieved, the need for activists in that particular area is eventually diminished.

Blockchain - Distributed Ledger Technology

Moderator

Ajmal Nazir – Chair Elect, TT MAG (Moderator)

Panelists:

Randall DeFreitas – Manager, Risk Assurance, EY

Peter George, Chariman, Bitt

Nigel Romano – CEO, JMMB

Glenn Mcknight – Trustee, ISOC



Blockchain panel (L to R): Mr. Ajmal Nazir (moderator), Mr. Glenn McKnight, Mr. Randall de Freitas, Mr. Peter George, Mr. Nigel Romano.

Panel Discussion

The format of the Blockchain panel discussion involved the moderator posing questions to the entire panel, and each panelist offering their views.

Blockchain for Social Good

Mr. Nazir asked the panel, “How do you see blockchain benefitting society as a whole in terms of inclusion and powering the masses?” Mr. McKnight responded by saying that CDs disrupted the vinyl records industry and blockchain will do the same to many others. He said that the Institute of Electrical and Electronic Engineers (IEEE) is currently working on three areas: reliable electricity, reliable data connectivity, and patient records. He said that blockchain technology has endless applications for humanitarian efforts, and is looking for social uses. Some uses include the distribution

of electricity to underserved communities, and it has already found a use case in many countries through blockchain land registries.

Mr. de Freitas said that newer cryptocurrencies have piggybacked on other blockchains. Bitcoin was the proof of concept for blockchain, right now people see Bitcoin and blockchain as one and the same, but the distinction is being understood more as awareness spreads. He said that one application in voting is the storing of voter ID on the blockchain, eliminating the need for workers to bring different documents, strengthening democracy and making it truly inclusive. Bitt is also using blockchain to create digital fiat currency for the Caribbean, to help strengthen the financial ecosystem and reduce the cost of intra-regional money transfer.

Mr. George said that in the early days of cryptocurrency, it was a battle between “believers and lunatics” now it’s a battle between believers and investors/speculators. He explained the trustless nature of the blockchain, and the mining process where (clusters of) powerful computers independently verify transactions. He said that marriage registries, conveyance contracts, and other regulatory procedures will become more frictionless. He also highlighted an MIT study stating that shipping costs into the Caribbean are \$700 million, inclusive of remittance, overnight fees, storage costs etc., and that they can be reduced by 70% using the blockchain. Outward shipping from the Caribbean can also experience significant cost savings using blockchain technology, according to Mr. George.

Mr Romano said that Jamaica Money Market Brokers (JMMB) is very interested in financial inclusion, bringing those outside the system into the system. He declared that “the blockchain is the Internet of the 21st century, the Internet of value,” with the potential to cut out intermediaries, including the banks. He said that while the transition will neither be easy nor an overnight process, the adoption of blockchain will help to help speed up e-commerce and hence increase GDP.

Blockchain and Banking

Mr. Nazir kicked off this segment by asking the panellists’ thoughts on blockchain disrupting the banking sector, and the feasibility of users “becoming our own banks.” Mr. McKnight brought attention to work being done in India, Bank of India using blockchain to help feed the hungry and bank the unbanked. Mr. De Freitas said that Bitcoin has been around since 2008, but that only since 2016 has the broader public started taking notice. In the time since the 2008 financial crisis, financial regulations became stricter, it became harder to move money around and do simple things such as open a bank account. He made the point that the growth of bitcoin in particular and cryptocurrency generally has enabled people to move money across the globe without

many of those restrictions. Now, banks are reacting, and there is even an initiative called R3 which is a consortium of banks working to explore blockchain applications in their lines of business.

Mr de Freitas continued, saying that whether banks can adapt quickly remains to be seen, and that might see new banks emerging which can do things faster and cheaper, as “blockchain-natives”. Of course, not all traditional banks will disappear, though some may - but with all technologies, it will take time for disruption to have its full impact.

Mr. George espoused strongly-held views on this topic. He said that without miners securing transactions cryptographically, blockchain is simply another database. He went on to say that many bankers are speaking about Bitcoin from a lack of knowledge, and that fractional reserve banking, upon which all of modern money is based, is illegitimate. Further, he said that money needs to have a limited supply and Bitcoin provides this - and regarding fraudulent initial coin offerings (ICOs), he likened them to overhyped initial public offerings (IPOs) during the dotcom bubble of the early 2000s. He declared that banks must embrace Bitcoin or they will be on the outside looking in, though he said that JMMB is one the first banks understanding this and hopefully the other banks will understand over time.

Mr. Romano referred to JPMorgan Chase CEO Jamie Dimon’s statement that he was too quick to comment on Bitcoin, though he remains skeptical of ICOs. Mr. Romano did urge a degree of caution, saying that blockchain applications ultimately depend on coding and the capability of the programmers to get it right. He made the analogy that the Internet is to email as blockchain is to Bitcoin, saying that it was the first use but only ONE use - so the blockchain is much more powerful and can change many things. He said that banks are recognizing this fact and are trying to get in front of it, though whether they will be successful remains to be seen.

Applying Blockchain to Government and Governance

Mr. Nazir opened this segment with the following question: “In 2008, the world blamed the banks. Now people aren’t happy with governments and the two-party system. Can governments become decentralized?” Mr. McKnight said that in Western countries, we have a history of representative democracy, not participatory democracy. He said we give up our control when we vote someone in once every four or five years, but the current generation wants more participation, and is used to having their voices heard, and will therefore change the status quo.

Mr. George said that the concern is more about trust in the democratic process than trust in the governments themselves. There is a white paper by [FutureGov](#) being explored in countries such as Estonia, where blockchain has the potential to

completely revolutionize voting and regulatory services. The aim is to stamp out corruption and help to find the best possible procurement mechanisms available for public projects. He said that the archaic institutions and structures that presently exist in many countries, including Trinidad and Tobago, are decaying. He gave the example that to open a bank account in Trinidad, you need 2 forms of ID and a fixed place of abode - many people in this country would not qualify, therefore they cannot save money in a bank, and carrying cash is a risk. This lack of financial inclusion poses a huge systemic risk and these issues can be addressed from a regulatory standpoint. Many countries are making the changes now and a change of public policy is needed. He said that If one is not participating in the system, one is almost not a citizen.

According to Mr. Romano, no one person has control of a blockchain as it is by nature immutable and incorruptible, but nevertheless there is use for it in governance. Realistically, he said, it cannot be used to vote on all issues as this would be difficult to manage, but he could definitely see use cases for the technology in relation to governance.

The Distribution of Network Value

Mr. Nazir started this segment with some examples. When WhatsApp was purchased for USD \$19 Billion in 2014, its valuation was based on the value of its network. An argument that has been in circulation recently is that when one joins a social network they add value to it, but the individual is not directly compensated for this value addition. However, blockchain technology creates the possibility of value exchange for one's data. The question he posed to the panel was: "Do you see a mass scale adoption of blockchain in the organizational world where we end up with decentralized systems?"

Mr. McKnight responded, saying that the reality is most powerful in society, those in whose hands power is currently centralised, are not going to give up this power very easily. However, allowing people to have more disposable income would be beneficial to society. In his opinion, the project is to convince the powers that be that having more equitable distribution of value would be beneficial to them as well. Mr. De Freitas made reference to current efforts in decentralised organisations, stating that there are 1400 cryptocurrencies at present, and that others can build decentralised autonomous organisations on the blockchain. He referenced Vitalik Buterin, the co-founder of Ethereum, saying that the western world trusts their government but other parts of the world don't and that's where the opportunity lies. Bitcoin grew from technological trust and social trust. Democracy has shifted from centralized control - monarchies, and tyrannies to democracies. In a sense, the top down has moved to a form of decentralized governance.

Mr. George said it will be difficult for “the 1%” to be involved because the current system is what keeps them there. For such people, decentralisation threatens their networks of power and access. Mr. Romano compared eras of the Internet: in the first age, information was decentralised and access was expanded, but in the next era, companies such as Google, Facebook, and Amazon became rich based on aggregating and extracting value from customers’ information. He suggested that blockchain allows one to own their own identity, and that based on this ownership, if others need to use it then they need to pay for it. This has the power to be a great equaliser.

Q&A

Estonia was mentioned, the population of Estonia is 1.3 million. The city has partnerships with Estonia to help in the Caribbean. Is bitcoin sustainable based on the amount of power that is used? Is this a concern?

AN: It’s a problem and it’s being recognized as not sustainable. Proof of work was the first consensus algorithm. The whole space is experimental. There are other consensus algorithms being explored, including proof of Stake, delegated Proof of stake, proof of importance, hash graph and others.

GM: Energy is an issue, but so is storage, and we can’t ignore either of them.

NR: It is recognized as a problem. Ethereum is looking to move from proof of work to proof of stake, where you invest money and bet on the outcome and if the outcome meets the criteria you are then rewarded.

What do you see as the role of the central banks in this? And what about tax laws?

RD: We need to be ahead of this and not simply followers in the space.

PG: We have sat idly by as central banks print money and Central banks need to go back to their core purpose.

NR: I suppose central banks will be disintermediated, if you are to use the blockchain then you remove the power from the central bank and put it in the code. It will be interesting to see how/if they give up their power. Bitcoin’s power is that everyone knows the supply, it’s open and transparent. You cannot say this of the TTD, USD and especially the Bolivar. With regard to taxes, income and profits – you need to pay taxes on profits which is up to the tax authorities to enforce.

Bitcoin will change everything. A question which relates to entrepreneurship. How do you see blockchain affecting entrepreneurs in a decentralized world?

AN: ICOs raise huge amounts of money, and this is not necessarily a good thing. There are discussions going on to see how to deal with it so it will become viable in the long run. Going forward it will be easier to raise capital, in terms of governance that will need work but get easier as well and smart contracts will help with stage funding requiring milestones being hit before more funds are released. More power needs to be with the investors.

GM: Rather than call yourself an entrepreneur, what is your business sector? If you see an opportunity, see how you can utilise the blockchain to assist. You can even start to accept payments in Bitcoin which is potentially a lucrative business.

PG: Let's not be fooled, people think ICOs are just stealing money, but people are taking money out of traditional legacy portfolios and putting them into ICOs. With a blockchain enabled world, there will be more ease of doing business, speed, less excessive costs, a lot less red tape.

NR: It depends on your interaction with the market because it's too difficult to answer straight out. If you are a blockchain developer then you are in very high demand. Getting paid and paying will be a lot easier; banks taking a cut will become harder.

What input do you get from stakeholders that we can do to prepare and train our citizens for the new world rather than just be bystanders?

GM: What school in Trinidad are they really creating value training for the future? Talk to the ministry of education and propose valuable training.

NR: I am not asking any government anything. Waste of time. If you wait on governments then you're in for trouble. Blockgeeks has courses online to learn.

I read a Guardian article that Bitt Inc. plans to use blockchain to use a single currency for the Caribbean. Can you expand on this?

PG: the Caribbean is one of the most underbanked regions in the world. Our intention is a single market currency across the Caribbean, cross-border payment using the blockchain. Could we have been at market already? Sure but we have spent a lot of time discussing with governments the regulatory requirements. We have taken a lot of time to ensure regulatory requirements have been met. Soon have the first digital central bank in the world. Social governance NGO - Digitising a registry is hard. There

is opposition to change. How do we get over the resistance to change from governments and public participants?

AN: China banned exchanges but decentralized exchanges popped up. The ecosystem will evolve and get stronger and the government will fall into place.

GM: The Canadian government was the 2nd largest donor to Haiti. They gave it to a Canadian institution instead of Haiti government because of lack of trust. We need to educate them to have transparent policies in their proposals.

RD: The government's goals need to turn to more bite-sized achievable objectives.

PG: It's an ethos. The inefficiency perpetuates corruption and corruption perpetuates inefficiencies. There are two options, one is to go on a platform and shout it out loud or the second is to become the authority. The time has come for a people based society; the power is within us not the blockchain.

Let's assume blockchain gets mass adoption. What are the top three things that need to happen to achieve this?

AN: The number of people getting involved is increasing quickly. No need to try and speed it up more. It's time for the projects to start to deliver.

GM: Digital stewards.

RD: Let governments stay out and have the space evolve organically.

PG: Financial inclusion is the most important thing. Otherwise those outside "don't exist". They need a sense of belonging. Another main area is identity protection.

NR: Get regulators to speed up adoption. Making 3G/4G available as well as education.

I see a great opportunity for blockchain to assist with fraud issues but I'm worried about the opportunity to aid money laundering and terrorism. What can we do to deter potential uses of these applications by bad actors?

PG: HSBC was fined for \$1.9 Billion for laundering money for a Mexican drug cartel. Barclays was fined for helping to finance arms to another cartel. Where there is money there will be crime. On the blockchain, you can track transactions much easier than cash. I can give you 25 examples of evil uses of cash in the banking systems. The issue is not digital blockchain or currencies, it's humans.

NR: Every transaction on the blockchain can be tracked and cannot be changed. Once I find out who you are your life becomes an open book. A criminal would be stupid to accept Bitcoin.

How does blockchain affect securities and stock exchanges?

AN: Tokenisation is becoming a big thing. It allows people who normally wouldn't be able to afford to participate in wealth creation.

PG: Issuance, tracking and validity will all become easier. Operating exchanges still requires human intervention but the blockchain will make it more effective and cheaper.

Open Forum

Moderator

Jacqueline A. Morris, Director, TT MAG

Accompanied by:

Kevon Swift, Head, Strategic Relations and Integration, LACNIC



Open Forum: Ms. Jacqueline A. Morris (moderator) and Mr. Kevon Swift.

Internet Governance Background and Regional Context

Ms. Morris introduced the session to the audience with the definition of Internet governance. Created by the Working Group on Internet Governance (WGIG) in 2005, Internet governance is “the development and application of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet.” She went on to highlight an important facet of IG governance in that it is multi-stakeholder and bottom up, and not simply the standard mix of government, labour and business that we are accustomed to in Trinidad and Tobago.

Rather, under the multistakeholder model, civil society sits at the same level as government, and everyone who has a stake in the Internet has an equal voice. Moreover, the stakeholders are the ones who raise IG issues of interest to them, and not necessarily the standard technical issues that would be discussed at fora such as the Internet Corporation for Assigned Names and Numbers (ICANN). The IGF is open, inclusive and transparent and focuses on public policy. The TTIGF is where we deal

with our issues and our reactions to the various Internet governance issues that are going on.

Mr. Swift began by looking at Internet Governance at the regional level in the Caribbean, recognising that two significant regional Internet governance initiatives, namely:

- Caribbean IGF (CIGF): a regional process that began before Internet governance was spoken into global policy by virtue of the World Summit on the Information Society (WSIS) in 2005;
- The Latin American and Caribbean IGF (LACIGF): LACNIC has been one of the 3 founders of the LACIGF, and still serves as the secretariat at the LACIGF.

Mr. Swift explained that the regional IGF initiatives are where participants get used to the multi-stakeholder approach, which he described as the most successful approach to addressing Internet public policy issues.



A participant shares a question during the Open Forum session.

Open Forum Q&A

Question from Eric Hopkins II: *How can one manage Internet access when it allows people to flout laws of the country e.g. not being able to advertise on election day but on Facebook you can continue advertising all the same. In China the Internet is heavily regulated. Can we do it in Trinidad and should it be done?*

Patrick Hosein, Trinidad and Tobago Network Information Centre

It's possible but it's up to the government to make it possible, and in our case I would advise against it. But in terms of the domain itself we can do a level of blocking but not to the point that China censors and regulates the Internet.

Kevon Swift

It comes down to what is an acceptable risk in Trinidad as opposed to China. Regarding sovereignty and the Internet, sovereignty applies – e.g. the case of LICRA v Yahoo - Yahoo made caches of sites and had information being made available to users but Yahoo can limit access to certain sites. Sovereignty does apply to the Internet.

Albert Daniels, Stakeholder Engagement Sr Manager for the Caribbean, ICANN
ICANN manages the unique identifiers, and they are a technical organization which has a set of staff that manages these things technically. They set the policy that ICANN staff uses to manage the identifiers. Whether it is the right thing to turn it off or on is up to the stakeholders of a country to determine.



Audience Participation during the Open Forum session.

Question from Lasana Murray, Software Developer: *Please explain the comment about commercial interests not being involved in Internet governance.*

Jacqueline A. Morris

The IGF strives hard to be free of commercialism. It's supposed to be a place where everyone comes and discuss issues free of marketing of products or services. E.g. Vendor X can't come and say they love Internet governance and it works best on a Vendor X computer.

Kevon Swift

When you have contributions from companies, we do not call them sponsorships but donations. Each one of us who is willing to understand, make a contribution or eave with a greater understanding of something. The donations must come without any expectation of commercial promotion.

Question from Shola Taylor, Secretary General, CTO: *After the forum what happens? What happened last year, what was the outcome? The IGF should not just be a talk shop, it should lead to some policies.*

Nigel Cassimire- part of that the CTU has been advocating in recent years has been the development of these national IGF and one aspect of it is in fact to address the point about a small group of people doing this for several years. Part of the objective is to expose more people on the ground to the issues of Internet governance and increase the pool of persons involved in it around the Caribbean. If we don't get policies being developed right away, part of the objective is the exposure and the education and increasing the pool of people involved.

Kieron Swift, Economic Development Advisory Board

at different points, concerns might have been raised and at others suggestions were made to move forward. Looking at the IGF we are aware of tools and techniques that are responsible for getting what Nigel Cassimere spoke about.

Glenn McKnight- there are online resources available to people who want to get involved. We have to invest in young people.

Comment from Shernon Osepa, Manager, Regional Affairs for Latin America and the Caribbean, Internet Society: *We are trying to solve too many problems, instead we should focus on a few. We cannot solve a lot of the big problems.*

Comment from Rishi Maharaj, Disclosure Today: *We don't have to reinvent the wheel, we have the foundation the problem is implementation and moving to the other step. We like to re-analyze and re-consult, perhaps too much.*

Kevon Swift

The Internet provides a lot more opportunities for changes in governance than just law. There are multiple avenues for governance.

Jacqueline A. Morris

One of the things we are trying to do here is for us to get up and make change happen for ourselves rather than waiting for someone to do it for us.

Question from Lasana Murray: *Is the forum reaching out to local and regional tech communities, and if not what do you have planned?*

Jacqueline A. Morris

Around this event we have reached out to the entire national community and you see that we have had an entirely different group of people this year than in 2017.

Kevon Swift

It's important to speak about the Caribbean IGF which is a regional process that has an end in sight.

Rabindra Jaggernaut, Director, TT MAG

The TT MAG is in the process of reaching out to recruit additional members. There must be some avenue to reach out to these individuals. Out of last year a report was done and also this year. TT MAG has to identify the stakeholder they need to target and see if we can get some interaction with them so that the message itself actually builds and gets carried forward.

Kevon Swift

Let's also be each other's keeper and look at children and the youth, have them understand what these issues are. There is no doubt that they are the ones that are most exposed to the Internet.

Question from Eric Hopkins II: *I would like to learn a bit about TT MAG, how often do you meet? What are some of the next steps?*

Dev Anand Teelucksingh, Chair, TT MAG

We are a group of stakeholders, members of various organizations. We have monthly meetings, on the first Saturday of each month. We are looking at ways to build capacity and ways in which stakeholders can join in an equitable manner, for example when we

send communications about a particular policy we want to see comments on. Most of the organizations can be joined easily. And the TTMAG is open to membership at <http://mag.tt/join>.

Questions from Jarryon Paul, entrepreneur:

1. *Does the TTMAG do a year round marketing campaign?*
2. *Is there consideration as to blockchain playing a part in TTMAG's operations?*

George Gobin, Director, TTMAG

We launched in 2017, and are now in the mode of building the organization, including marketing.

Niran Beharry, Vice-Chair, Internet Society T&T Chapter

We welcome anyone, we need younger people to come in and represent us on an international stage. Join any one of the member organizations and you have a voice in the TTMAG. The more organizations we have the louder our voice is.

Kevon Swift

We need to understand the different ways in which we communicate with different stakeholder groups. Engineers speak a language that lawyers do not speak.

Robert Martinez, Director, TTMAG

To re-emphasise Dev's point, the TTMAG is open for membership, and in fact a membership drive e-mail has been sent out. I encourage all interested to join.

Comment from Talya Mohammed, Entrepreneur and ISOC-TT Secretary/PRO: *Some of the struggles that the TTMAG is speaking to are shared difficulties that other NGOs are experiencing. I commend the TTMAG for understanding these challenges, and I encourage any entities that want to join to do so.*

Comment from Shola Taylor: *I commend the TTMAG. Thank you and congratulations.*

Comment from Kevon Swift: *I commend the TTMAG on their efforts.*

Closing Remarks

TTMAG Chair-Elect Ajmal Nazir gave brief closing remarks, where he summarised the key takeaways from each session. From the DFS session, we heard that cash is becoming a legacy technology and digital payments are becoming the standard, though significant challenges remain. From the Gender Activism Online panel, what stood out was the power of social media, and how effective it can be in instigating change in our society. From the Blockchain session, he found that it's a highly exciting space, poised to change many aspects of society, though it is early and things are moving very quickly.

Mr. Nazir extended thanks to keynote speaker Mr. Taylor of the CTO, Ms. Bernadette Lewis of the CTU, Mr. Glenn McKnight of ISOC, Mr. Shernon Osepa of ISOC, volunteers from IEEE, ISOC-TT and TTCS, as well as the TTIGF 2018 partners: TTNIC, AVIT Ltd., the CTO, IGFSa, ISOC, ITU, IEEE, LACNIC and the TTCS. Finally, he thanked the audience for their attendance and participation.