Trinidad and Tobago
Internet Governance Forum (TTIGF) 2020

- Our Partners -

The Internet & YOU: Ensuring the Internet's Future

January 31st, 2020

Naparima College Auditorium, San Fernando, Trinidad and Tobago

Overview

The annual **Trinidad and Tobago Internet Governance Forum (TTIGF)** took place on Friday 31st January 2020 at Naparima College Auditorium, San Fernando, from 8:30 am to 5 pm.

The TTIGF 2020 consisted of 2 panel discussions and a youth-led workshop around the theme ***"The Internet & YOU: Ensuring the Internet's Future"***. Two panel discussions were ***Fake News & Its Impact in YOU*** and ***Data Hosting: Locally or Internationally?***

There were 71 face-to-face adult attendees including panelists, 72 from 14 secondary schools, special invitees and TTMAG Directors, and 270 views of the livestream via YouTube.

The structure of this report follows the format of the TTIGF 2020 event, with four sections:

- Introduction and Opening Remarks
- First Panel Discussions
- Youth Workshop

- Second Panel Discussion
- Open Forum
- Conclusion

Hosts

TTIGF 2020 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., Internet Governance Forum Support Association (IGFSA), Latin America and Caribbean Network Information Centre (LACNIC), L'Onction Friandises, the Trinidad and Tobago Network Information Centre (TTNIC), Trinidad and Tobago Internet Exchange Limited (TTIX), and WiPay (Trinidad and Tobago) Limited.

Resources

TTIGF

Website: http://igf.tt

Email: info@igf.tt

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 Ajmal Nazir regaled both in-person and online participants. He noted that through our TTIGF initiative TTMAG has tackled hot topics impacting the internet community and customized them to Trinidad and Tobago's environment. He asserted that it is becoming more important that we educate the local market and address the pertinent emerging issues and protect our internet. The theme for TTIGF 2020 is " The Internet and You: Ensuring The Internet's Future" Mr. Nazir briefly shared with the audience the central topics embedded in the 2020 TTIGF forum. The first topic being "Fake News and its Impact on You" and the second topic "Data Hosting: Locally or Internationally?" he noted is extended from TTIGF's 2019 forum on Data protection. He also shared with the audience that TTIGF 2020 will introduce its first Youth-Led Collaborative exchange topic "The Future of the Internet" Mr. Nazir suggested who else can give us a better insight into the future than our own future generation. He also shared with the audience that outputs from the previous three iterations of the TTIGF were shared at other regional IGFs including the Caribbean IGF (CIGF), the Latin American IGF (LAIGF) as well as the Global IGF. TTMAG's chair concludes by extending an invitation to organizations to join the TTMAG to enhance the local voices in internet governance discussions both locally and globally.

TTGF

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INTERNET
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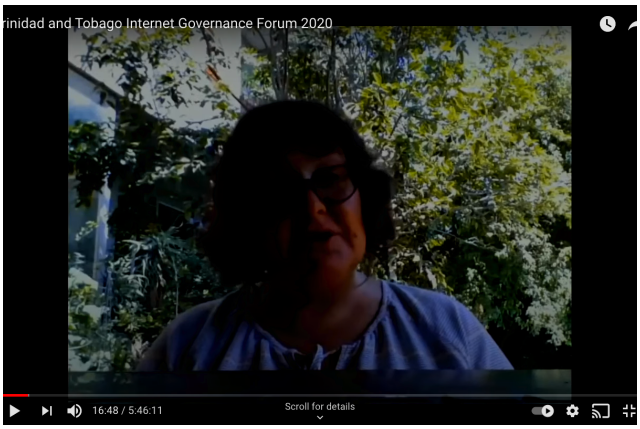
TTGF

Chair of Proceedings and TTIGF 2019 Convenor, Tracy Hackshaw warmly welcomed the attendees of TTMAG 2020, then introduced recorded welcome remarks from the following global internet governance leaders:

- Vince Cerf, Vice President & Chief Internet Evangelist for Google
- Anriette Esterhuysen, Chair of the United Nations Internet Governance Forum's Mulistakeholder Advisory Goup
- Senator the Honorable Allyson West, Minister of Public Administration and Digital Transformation.



Keynote speakers addresses - Vint Cerf, Chief Internet Evangelist, Google (top left), Anriette Esterhuysen, Chair, UNIGFMAG (top right), Senator the Hon. Allyson West, Minister of Public Administration, Ministry of Public Administration (bottom)

Panel Session 1: Fake News & Its Impact on YOU

Fake News & Its Impact on You panel (L to R): Mr. Mark Lyndersay, Asha Javeed, Sgt. Danel Hernandez, Shernon Osepa, and Ms Anita Sohan (Moderator).

Moderator

Ms. Anita Sohan, Director - Trinidad and Tobago Multistakeholder Advisory Group

Participants

Mark Lyndersay, Editor - TechNewsTT and Opinion Leader Columnist, Newsday

SGT. Daniel Hernandez - Head, Cyber & Social Media Unit, Trinidad and Tobago Police Service (TTPS)

Asha Javeed - Senior Multimedia Investigative Journalist, Caribbean Communication Network (CCN)

Shernon Osepa - Manager, Regional Affairs for Latin America & The Caribbean Bureau Internet Society (ISOC)

Introduction

Panel moderator Anita Sohan opened TTMAG's first panel discussion on Fake News citing that it is associated with terms such as disinformation and misinformation. She also acknowledged the prevalence of fake news both globally and locally; she observed that it is especially common with reference to the government and public service.

Question from Moderator: What is your interpretation of fake news?

Mr. Osepa expressed his gratitude for being able to contribute at TTIGF 2020. He cited that fake news is an unambiguous term that has not been well-defined globally but shared three examples of his take on the definition of fake news.

1. Fake news are false stories that appear to be news spread on the internet or using other media created usually to influence political views or as a joke.
2. News articles with intentionally false information.
3. Fake news is a news article that is intentionally invariably false.

He observed that fake news has been prevalent since the beginning of time. However the issue really lies where it is becoming increasingly popular for persons to use social media as their only source of information. Conclusively he simply acknowledged that fake news is a lie, the dispersion of misinformation. On a broader spectrum it's impact depends on the authenticity and intent of the content.

Question from Moderator: In its relation to Trinidad, is the issue of fake news the dissemination of incorrect or misleading information or do you think there is a more deliberate intent behind the narrative?

Ms. Javeed pointed out that in its association with Trinidad, Fake News is a combination of both the dissemination of incorrect and misleading information shared with the intent of deliberately changing the narrative. She pointed out that due to an increasing number of bloggers that there is the dissemination of inaccurate data being propagated as news.

Mr. Lyndersay articulated that the very idea of Fake News itself suggests that there is news that is in fact falsified. He observed that there is this great divide. We live in a space where the nuances between outright untruth and absolute fact blend across a big strata and people dip into it at different points. The challenge with fake news is not really a challenge of information because it is the essence of news gathering. The business has always dealt with people who want to put a spin on or outright bend facts to suit themselves. The problem is an authority problem. Within the last 5 years in particular the traditional news gathering system has undergone a fundamental challenge in their authority, their capacity to reach an audience that before believes what they are reading and that in nature is one of the enabling policies of the internet. There hasn't been a bold enough or strategic enough strategy to find a way of recasting that presence of authority in a new media that is fundamentally changing the way that we think about information.

Question from Moderator: How can you fact check fake news? Is there any legal framework that can be enforced to alleviate this issue?

Sgt. Hernandez opened his discussion on Fake News by sharing the statistic that 62% of adults in the US receive their news via social media. He pointed out that as it relates to Trinidad and Tobago it is quite usually the case that news would be dispersed to the public via traditional media houses however with the advent of the internet we are observing a phenomenon where news is instant and because of its instantaneous nature the public tends to believe that this news is also credible in nature. He asserted that traditional media sites are the preferred source of reliable information whereas the information shared on social media is usually not verified. He observed that there are detrimental effects Fake News has on a society that has been misinformed . He pointed out that this is the reason why the TTPS is promoting technologies like the TTPS app and other platforms where citizens can gather information from official responses regarding issues at hand. He understands that the citizenry feels comfortable in getting information as quickly as possible but advises that it must always come from a trusted source.

He shared the following advisable tips on avoiding Fake News:

1. Read past the headline and get into the details.

2. Fact check which media outlet has published the article, he advises that information should be obtained from traditional media houses.

3. Some trusted sources are officials such as the Commissioner of Police, The Minister of National Security, etc

4. Check the date and time of the publication, the author, look at which links and sources are used, look out for questionable quotes and photos, beware of confirmation biases, search if other news outlets are reporting it.

The Sargent admonished that when Fake News is disseminated many times it is difficult to rectify the inconsistencies after and this is the most detrimental underlying issue.

Legislation

Sargent Hernandez then proceeded to share some of the legislative framework surrounding false communications.

1. The Telecommunications Act. Chapter 47:31 Section 68

(1) A person who by means of any telecommunications or radio-communication service sends any communication that to his knowledge is false or misleading and likely to prejudice the efficiency of any life-safety service or endanger the safety of any person, ship, aircraft, vessel or vehicle commits an offence and is liable on summary conviction to a fine of one hundred thousand dollars and to imprisonment for three years.

The Sargent admonished that the TTPS takes a very stern stance on the dissemination of information that is not credible. It is also important to avoid reposting information that has not been checked and verified. We need to be responsible citizens when it comes to the information we publicize.

2. The Summary Offences Act Chapter 11:02

TELEPHONES AND TELEGRAMS

106. Any person who—

(a) sends any message by telephone which is grossly offensive or of an indecent, obscene, or menacing character; or

(b) sends any message by telephone, or any telegram, which he knows to be false, for the purpose of causing annoyance, inconvenience or needless anxiety to any other person; or

(c) persistently makes telephone calls without reasonable cause and for any such purpose asmentioned above, is liable on summary conviction to a fine of two hundred dollars or to imprisonment for one month.

He summarized by saying these are the legal framework put in place and that can be enforced to curb the phenomenon of Fake News.

Updating Legislation

Question from Moderator: Do you think that the existing legislative framework can properly be used to curb the phenomenon of Fake News? Should there be more regulations in place? How can we balance the regulation with freedom of expression without threatening freedom of the press?

Mr. Lyndersay observed that there has been a distinct uptake in the judiciary to reexamine what's happening in the real world in the context of the law that is available and the law that is being drafted and pressed into service. He observed that there are more and more instances of people who have perpetrated acts of gross violations upon other people. He is of the opinion that we don't have a fake news problem, but rather we have a Facebook problem. Mr. Lyndersay suggested that the News Feed is largely underestimated and has had an undermining impact on Journalism professionalism in the last five years. Because of the term "News Feed" posts appearing under this term flattens out the information. He noted that this information is intended to be posts from your friends and family and the people you trust, so people have a natural tendency to trust their news feed. Into this flattened space that you grant a certain measure of trust, fake news can very easily infiltrate this trusted space. It is quite easy to share this information with the people you trust and care about and this is where fake news can pick up momentum. Journalism on the other hand has rules and a certain measure of transparency. With journalism you know who is doing the reporting and you know who is involved in

the production of things. Facebook is simply a black box. It has the ability to consume the attention of quite a number of Trinidadians and branches out into other social media where things get shared. This information appearing in this flattened feed, where things are trusted by instinct, migrating into other networks such as Twitter, Instagram, Snapchat and all the other social media platforms, completely unregulated and produced by a company which insists it is not a publisher even though it publishes more information than any news outlet in the world. These are the things we need to consider most personally and institutionally about the things we are engaging with. Technology has a massive amount of unintended consequences. Facebook was created to propagate fake news. There are uncounted unintended consequences as a result of this technology that we need to become more aware of if we are going to tailor our understanding of these rules and regulations.

Ms. Javeed, adding to her colleague's remarks, pointed out that because this kind of platform exists in Trinidad, it is very open to manipulation by people who have different agendas. Facebook is a field ground for misinformation. People who have agendas, especially political parties use Facebook as their platform to spread misinformation.

Mr. Osepa was of the view that we need to be careful not to penalize the internet generally speaking because the internet is not good and it is not bad. For example elaborating a bit on human rights sometimes we make a distinction between the online world and the offline world but in reality there are no differences between the online world and offline world with respect to human rights. The implementation would be a challenge. For example how are you going to enforce online hate speech as this is a challenge in itself. We have to be careful on making decisions based on the online and offline world because based on the universal declaration of human rights we can't have enough mechanisms in place to address challenges that we are facing in the online world.

Question from Moderator: There are a few countries for example France and Singapore that have specific legislation relating to fake news. Is ISOC doing any work within the region and can you share some perspectives on what the situation is outside of Trinidad?

Mr. Osepa, ISOC representative shared that generally speaking of you look at internet related human rights we have privacy, freedom of expression the right to receive important information, we have

various rights focusing on protecting cultural linguistic and minority diversity, the rights to education, children rights, the right afforded to journalists and the press etc. Essentially the internet and social media is just a tool of today. We have to look at human rights and if we look at it one way or the other we are able to also address online challenges in one way or the other, even with existing laws we are able to address them as well. When you draft a law it should be technology neutral.

Sgt. Hernandez agrees that legislation is quite dexterous, he asks the question, how do you govern and put things into place in relation to the internet and by extension how do you deal with fake news. There is also the balance between press freedom and individual rights. We need the press but the question always arises how far do we go in terms of publishing information. Should there be any regulation in terms of coverage for media houses or journalists should there be some form of regulative body. Sgt. Hernandez gave reference to the Dr. Damian Tambini, co-author of the paper "Regulating in a Digital World" whose work engaged the UK government to explore statutory involvement in media regulation. He noted that there are grievous consequences that fake news poses to evidence based decisions.

As a journalist Mr Lyndersay expressed his immediate rebuttal on the notion of regulating the media. He counters by acknowledging the fact that there is bad journalism and there are some journalists who are negligent to the standard of the content they publish. That he says is unfortunately the nature of freedom of speech. there are laws that govern when persons tether into the obscene and into defamatory climates and these laws are laws which should be enforced when they are deemed necessary. The inevitable result is that the price of freedom of speech lays an avenue for fake news but you have the freedom to counter that with sensible ordered discussions. Mr lyndersay expressed that he would hope that persons who are responsible for governance, national security and the protection of the country can in their capacity separate evidence from simple hearsays.

Question from Moderator. There was a survey within Latin America and the Caribbean. Where Trinidad was one of the countries surveyed and 56% of persons are of the view that fake news is spread around election time. There is also the Cambridge analytical scandal. Do you think that there is enough media information literacy around this issue to allow persons to decipher truth from false?

Ms. Javeed posited that as media we can always do better. There is a lot of verification that has to happen and whether we like to admit it or not alot of news that traditional media gets is from social media itself and the onus is on the media houses to ensure there has been sufficient verification, that information put forward is accurate. Even without elections there exists a very robust social media community and usually it is the TTPS and government officials that are the ones who put out statements and press releases rectifying most incidences of fake news. She also pointed out that in political affairs, oftentimes information once it does not serve a public official it is deemed as fake news. Sometimes a story can be accurate but because of its angle once it does not serve the politician of the day it is labeled or branded as fake news. She concluded by saying sometimes good sources come with bad information and it is necessary to run multiple verification checks.

Q&A

Question from Jacquline Morris (ISOC Trinidad and Tobago)
By definition the word "news" should be properly researched and as accurate as possible, if there are any inconsistencies it should be rectified. Occasionally, while hastily acquiring information the material received may sometimes be invalid but that does not mean the news is fake. There is a lot of nuance in information and sometimes we tend to digest this information in a straightforward manner rather than getting into the details. The way we are receiving information and then interpreting can result in inconsistencies. We need to learn to receive information in a more intellectual way and how can we educate people on going more in depth?

AJ I hear your point however it is actually President Donald trump who propagated the term "Fake News" throughout the world and it has been adopted by politicians globally. We could have another word for misinformation but it is simply a catch phrase for information that is wrong.

ML "Fake News" is simply a catch phrase. I think we need for people to understand the role of Journalism in reporting, fact checking and analyzing news and it's role in civil society as a result. Sometimes after being exposed to Fake News it is challenging to clarify information and declare facts about a situation.

DH We live in a democracy and any democracy relies on a well informed populace. We cannot deny the populace being from being well informed however there is sometimes the circulation of misinformation. This misinformation has the potential to be harmful and it undermines society. I think it is incumbent upon us as a country and as a group of people to balance it. We need to be well informed as a populace but we have to be careful with the power that misinformation carries.

Question from Maria O'brien, Google Women Techmakers
Specifically, with regards to your unit cyber crime and social media how many criminal cases in the violation of human rights discrimination and gender based crimes do you feel your unit uncovers per year and is this data accessible to the public?

DH There is no issue in terms of handing information over to the public. Yes information is available in relation to cybercrime and offences. Requests for data can be conducted through the Office of the Commissioner of Police.
Cybercrime encompasses more than just the internet. The Cyber and Social Media Unit gets involved in any traditional crime that has a cybercrime, internet or online component any case that has a cyber element The Cyber and Social Media Unit gets involved so it is very hard to give exact figures because almost every crime in Trinidad and Tobago has a cyber component.

Conclusion

Ms. Sohan expressed her thanks to our wonderful panel. In closing she remarked, the take away from this session is that Fake News is definitely a topic that needs more discussion. it's an issue that's not going to go away anytime soon. We need to be conscious of the fact that what exactly is fake news, how do you fact check. We understand that traditional media, they have a presence online as well but they do have checks and balances built in in terms of verifying information. If we do look at some sort of regulation we have to be careful not to threaten freedom of journalism, freedom of speech.

Panel Session 2: Youth Led Collaborative Exchange Report

Introduction

The theme of this year's TT Internet Governance Forum was "The Internet & You - Ensuring the Internet's Future." TTIGF ensured that within this critical conversation that Youth, who truly are the consumers and the creators of our digital future, had a significant role and voice amongst the conference's dynamic audience of industry tech leadership and social entrepreneurship.
Youth were represented both by the strong and balanced attendance of both male and female high school students, but also, by the dominantly female group of youth leaders who responded to the call for youth leaders in this substantive planning and discussion around key Internet Governance Issues. As intended, an exciting and interactive, and effective youth session took place.

Youth Leaders

- Stacey Grifitth-Alves
- Kimberlee Laloo
- Sarah Sobrian
- Neha Maharaj
- Darren Ramsook
- Shiva Ramoudith

Topic 1 - The Good, the Bad and the Potential of Online Communities -Sarah Sobrien

Join me in discussing the Good, the Bad and the Potential of Online Communities. As the years go by Online Communities have been increasing as fast as technology, leading individuals to be more invested in mobile or pc devices versus real-life interaction. Let's talk about Why and Where the interest arises, and how we can prevent misuse of the technology, allowing us to reap its benefits, whilst curbing the negatives. Some aspects that may/can be explored are online entertainment platforms like video sharing sites, social media, and gaming. - Sarah Sobrian

Discussion Notes from Sarah Sobrien

Positives:

- Helps people who can't communicate face to face because of emotional/mental issues. It makes it easier to express themselves. (Almost all the teenagers agreed on this)
- Exposure to various cultures all around the world, opens one's mind to learning about and understanding issues they don't have personal experiences in or never knew.
- Gives a choice to the type of community one wants to belong in, which makes a person feel accepted or comfortable in. For example, choosing a laid back group to relax outside of politics. Or choosing a group to openly debate about politics and have views exchanged without backlash.
- Facilitates forums for larger common interest groups to exchange knowledge and create strong, new ways to strengthen that common interest or their dealings of/around that interest.

Negatives

- Relying only on online communities for communications may lead to worsen current social anxiety of real life interactions if not addressed professionally.
- Exposure to many cultures and sharing one's culture may become overwhelming or clashes in views may occur or even xenophobia towards oneself may be experienced.

Topic 2 - Big Tech - Darren Ramsook

Join me to discuss how "Big Tech." is using its user's data to optimize its algorithms and how this is most times unknown to the end user. Let's discuss the ramifications of this and how we can curb the negative impact this has. We first started off with a survey within the group. The group had 22 participants and the first question asked was: "How many people actually know that 'Big Tech' companies mine data from their users? For example your Amazon Alexa recordings" Only 4 people knew this. Then another question was asked: "How many people care that big tech companies has access to this data?" 18 people said that they cared while the remainder said that they don't mind giving up their information once they get an efficient service from big tech.

At this point we noted that the problem of allowing your data to be accessed by different companies is multifaceted as there are individuals that do not mind that their data is mined (once they are given a service) and there are individuals that do not want any part of their data to be collected.

We then discussed other examples of big tech keeping data and using data recurrently: Amazon Alexa Recordings, Facebook Posts, Twitter Posts, Instagram Captions etc.
We noted that at any given point in time there are two instances of a person: their physical manifestation and their digital manifestation.

We then talked about some possible solutions that can be taken by the country of T&T to help curb some of the more negative repercussions of this:

- The simplest one is public education. It was agreed that we should take it upon ourselves as a country to self educate as well as educate our peers about how big tech is collecting data across all its users.
- Another point given was that a more condensed terms and agreement should be used along with the traditional terms and agreements. For example, when agreeing with the traditional terms and agreements, the user should have to agree to a condensed bullet point format of the agreements that clearly state what data is being collected on that user.
- Have a time limit on data for big tech companies. Another possible solution to help alleviate the impact is to impose a time limit on data collected by these companies; Such as deleting data collected every 3 months etc. A possible implication of this that was brought about is that if new data is derived from existing user data, will that data have to be deleted in a timely manner as well? An example of this is Audio recordings being transcribed into text. Will this text be property of the user or the tech company?
- Implement a watchdog group. Another idea pitched is the implementation of a watchdog group that represents both government and non governmental entities. The purpose of this group will be to ensure that data regulations are being followed within the big tech companies.

We also discussed the trends that are used by other countries like the US and European countries. We discussed that we can take inspiration from the EU and their implementation of the GDPR.
In closing we noted that this is a very multifaceted problem; in that there is a different case for all users and tech companies.

Topic 3 - Internet Pollution - Darren Ramsook

The topic of internet pollution sits at the content layer of internet governance. It was discussed from two perspectives; firstly regarding its carbon footprint and secondly regarding the harmful or illegal content that clog the internet. Discussions on Internet Pollution raised an awareness of this issue to youths who previously had no understanding of the topic. It was acknowledged that e-pollution takes the form of spam mails, viruses, phishing attacks and other detrimental content on the internet. Also, discussions were held around the fact that e-pollution contributes to 2% of the world's carbon emissions. This raised concerns about how data centres are powered and whether or not they were fuelled by green energy. One participant spoke about Microsoft's Project Natick which involves the successful functioning of an underwater data centre and is run on 100% green energy. BigTech companies who have taken initiatives to go green were discussed such as: Google, Apple and Microsoft. Moreover, the issue of what Internet Service Providers (ISPs) can do to reduce internet pollution pertaining to harmful content access on the Internet was discussed. There was a suggestion that ISPs can facilitate broadband shields at no additional cost to the customer to provide the option of filtering 'junk' that enters their personal internet space. It was important to note that the freedom of choice for Internet users was to be upheld while considering these initiatives. Stemming from this discussion, the group was interested in having local ISPs publicly expose what they are doing (if anything) to be green in order to provide their customers the option to buy into their service.

The group then came up with the following key points on how to reduce Internet Pollution:

- Start removing unused personal content from the Internet
- Delete stored data for unused Apps E.g. Games
- Opt-in to green web browsers E.g. cleanfox
- Prioritise using the television for streaming movies/shows as much as possible instead of the Internet
- Opt-in cloud storage with companies that have green initiatives

It was unanimous that more collaborative stakeholder (government, education, lobbyist, private sector) efforts should be taken to sensitise the local population about Internet Pollution. Furthermore, a key issue raised regarding a lack of green initiatives from ISPs in Trinidad and Tobago was the lack of competitiveness of our local Power Market where the price of electricity is cheap and heavily incentivised.

Overall, the session was very productive.

Topic 4 - Encrypting Data - Kimberlee Lalloo

Upon gathering with the designated students for my discussion, I firstly gave a definition for encryption and then used two students (presented a scenario of having them communicate messages without anyone else being able to understand what is transmitted besides the sender and the intended receiver) to give a very high level example of how encryption takes place. Afterwards, I proceeded to ask a trivia question concerning encryption - What are the two main categories of encryption? - No one was able to answer it, so I gave the answer (Public Key and Symmetric) and a very brief explanation of each.

After that, I started asking some questions to the students:

- Can you give examples of how encryption is used in our everyday lives? What are some of the benefits associated with using encryption? -> Students had answers such as allowing secure communication, ensuring privacy, etc.
- What are some disadvantages associated with using encryption? -> It was at this point the students took some time and did some thinking. One of them raised the issue of terrorists using encryption to facilitate secure communication and carry out attacks.

I then mentioned that there was a very big issue between Apple and the FBI in 2016 following the San Bernardino attack. I explained that the FBI wanted Apple to provide a means to allow access to one of the terrorist's cellular phones (very strong encryption put in place by Apple). I then reintroduced the points mentioned before about user privacy and security but this time from the terrorist's perspective.
Some students found that this was one of the pitfalls of using encryption and were in favour of making it legal (in an effort to prevent/reduce terrorism). Others said that it should not matter who is being scrutinised as privacy is applicable to all persons. If Apple had allowed this, would this be considered satisfactory?

As said by Tim Cook in a letter to the public (briefly mentioned the letter on Apple's website):
While we believe the FBI's intentions are good, it would be wrong for the government to force us to build a backdoor into our products. And ultimately, we fear that this demand would undermine the very freedoms and liberty our government is meant to protect.

For the students who were in favour of making encryption illegal (in favour of detecting communication among terrorists), I added some additional points to the discussion:

- How would this affect user privacy? -> One student made mention of the use of encryption in E-Commerce systems and the fact of not using it would be quite worrying.

- Each country has its own set of laws pertaining to computer misuse and protection.-> It would be very difficult for all countries to come to a common understanding of making encryption illegal.
- I also added the fact that communication applications have been developed by Al Qaeda and many software is licensed under the general public license, meaning that they are free, often non-copyrighted, and enabled with permissions to copy and/or modify the code. -> The terrorists can essentially use what they want to communicate and there are allow of resources that are freely available to do so.

I decided to throw in another trivia question: How do you know that you are visiting a website via an encrypted connection? -> One student mentioned HTTPS and for those who were a bit unsure, I gave a live demonstration using the browser on my mobile phone.

I then asked the students - How would this affect Apple as a company if they were to facilitate the FBI's request? -> Some students were a bit unsure, but one raised that fact that it would be very difficult to trust Apple and how would people know if the FBI would be using the backdoor only once?

I then mentioned that it would also affect the economy and could potentially give rise to competitors (external to the US) who are not bound to any regulation set by the US Gov't.

In summary, the discussion was lively, and students were attentive in raising points for and against the issue. In the end, everyone was on the side of keeping encryption legal and with respect to terrorism, we were able to raise some points that could potentially be done:

- Use very powerful computers to crack encryption measures.
- Utilization of targeted intelligence and malware to monitor terrorist communication. This point raised another issue of whether or not doing this was illegal. *

Lastly, I presented the website: www.haveibeenpwned.com and explained the purpose of it (determine whether your online accounts were ever compromised in data breaches). I suggested that those who were breached should change their passwords. This also led to a brief mention that encryption can be done while data is in transport and at rest (while at the server).

Topic 5 - IT for Clean Energy - Shiva Ramoudith

- Implement Reduce, reuse, recycle online management systems
- Gather data to track and monitor energy usage and to track climate goals.
- More sensitization and educational programmed required to get people more aware of the negative impacts of carbon emission
- Use tech to increase energy efficiency of vehicles Implement legislation and policies for smooth transition to a cleaner T&T
- Implement policies and procedures for proper disposal of E-waste
- Reduce 'red tape' in the disposal of E waste
- Create a Sharing economy - more carpooling, create online systems for sectors that require the same information
- Educate young adults about renewable energy
- Develop facilities to accommodate clean energy vehicles and other products eg. User friendly charging stations.

Topic 6: Social Media & You - Neha Maharaj

Negatives

- Decreased productivity levels in school
- Cyber-bullying
- Higher risk of depression (body image, self-esteem issues)
- Spread of misinformation
- Risk of addiction - promotes procrastination and serves as a distraction

Most used apps were Instagram and WhatsApp
Major issues raised were mental health issues. Notes on this and other points are:

- Major self esteem issues- triggering depression and anxiety in young people - keeping in touch but can also but untrue
- Peer pressure
- Misinformation spread on WhatsApp
- Effective to get info for youths faster
- Encourages collaboration
- Advertising and marketing although false advertising can occur
- Consumer feedback can be used to fix promoting (activism)
- Addiction can be curbed using time limit on apps or create new habits
- Affects almost everyone's self esteem
- Solution - change of lifestyle (change following by following things that promote positivity etc)
- WiFi as communication for emergencies eg whatsapp
- Advertisements should be positive
- Privacy issues: data trail can put people in danger- this can be prevented by spreading awareness *there's a fine line between convenience and privacy*

Conclusion

Given the opportunity, not all young people would grab the stage at an event with leaders from all over the region and locally, looking to them for guidance and leadership for an hour or so. It opens up so many weak points of insecurity and self confidence. However, we were very proud of the efforts and the compassionate leadership executed by each youth leader.

Interview with George Gobin and Dev Gosein

Dev Gosein : We are here at naparima college on the 31st of January at the 4th TTIGF. George what do you think of the event so far?

George Gobin: it has been an exhilarating event from the content that we have seen so far. This morning we started out with our video greetings being sent by global officials who could not be here physically. Our most prolific guest who couldn't make it was Mr Vincent Cerf who is the father of the internet. He developed the TCP/IP protocol which we all use today in terms of the internet. We went straight into the chairman's message, and then moved on to the much anticipated session on "Fake News" where we had some prominent panelists.

Dev Gosein: As you mention "fake news" George the term seems like an oxymoron.

George Gobin: Yes absolutely it is, is it fake or is it news? I think that's what the intention was and this was one of the points that the officer brought up. It was an interesting panel with a lot of pros and cons. At the end of the day, it was easily summarized that this session was too short in order to get everybody's views. So we at TTMAG are going to try to have a longer session where we can have more input from the panels and absolutely more input from the attendees.

Dev Gosein: What I liked about that session was the engagement with the students. It was an engaging topic for everyone here. As you know we have this new coronavirus illness and there's a lot of information and misinformation being interpreted. Having the kids here is something I am very passionate about. Do you remember we intended to have just 3 groups and now the number of groups presently far outnumbers that? I am elated that the TTMAG can incorporate the youth into the TTIGF. I believe TTMAGs members participated in an IGF at Berlin and this is where the idea of incorporating the youth came about.

George Gobin: Yes it was at that event we got the idea to involve the youth because they are the future and the next session's topic is "The Internet and You" and this is where we will have our first youth-led panel. These are the guys who would be using a lot more of this technology as we go. But let me stray a little bit please Dev if you don't mind and talk about why we decided to do the TTIGF in San Fernando and specifically at Naparima College.

Dev Gosein: Is it because you are a past student of NAPS?

George Gobin: Yes I'm an alma mater. I am very proud of our school and it's achievements. But typically events like this are held in the North or Central and we never allow people from different areas of the country to get involved in these kinds of events so we thought it was wise to find a nice venue like this. I think we have participating approximately 12 - 13 schools today which is excellent.

Dev Gosein: Yes I believe last year we only had two schools participating. Naparima College and Holy Faith Convent Couva. But we have to agree that the venue is awesome.

George Gobin: The TTIGF stands for the Internet Governance Forum. An Internet Governance Forum is really to talk about issues like data privacy, how is the internet being governed, who owns it and what can you expect in the future. One of the metrics that I really want to talk about is that today's world population is 7.6 billion and only one third of these people have access to the internet. We have today's challenges with the internet and we have opportunities to network using social media etc but what's going to happen as we bring the internet to the other 2/3rds of the world's population. I think that's where the governance issue is primarily going to have to focus on. How do we manage and control this?

Dev Gosein: There's a saying, the internet should be ubiquitous, like oxygen, so just as we need oxygen to sustain us and to live to be alive, those of us who have it don't know what a valuable resource it is and therein lies the need to have it managed and governed properly. I'm glad the youth is here to give us their perspective of what the internet of the future is going to look like.

George Gobin: And that brings us back to where all this started from we belong to an association Called TTMAG which is the Trinidad and Tobago Multistakeholder Advisory Group and our mission at the end of the day is to really bring up issues that affect the government, education etc and to bring up privacy internet governance how do we manage the internet. TTIGF is our premier event that we hold every year and this is our 4th consecutive year. We have been internationally acclaimed for being the first in the Caribbean to host these kinds of events and bring these types of topics to the floor.

Dev Gosein: Yes there's a little structure of the TTMAG and because of the fact that it is the Trinidad and Tobago Multistakeholder Advisory Group every facet, every element of who would require the use of the internet or look at some of the things that are required for the internet. We have a voice that would make that decision or make that cry for the underprivileged or whoever it is in society.

George Gobin: So the take away we would like to leave with our viewing audience is really. Be a part of it. You are welcome to join us online to join us at www.mag.tt which is our Multistakeholder Advisory Group. This Internet Governance Forum where you will see the presentations the participation by audience and findings that came up at www.IGF.tt

Dev Gosein: On that same website www.IGF.tt you will have access to live streams, you will see presentations of all the other IFG that we have had so feel free to read the contents view the videos see what we've been up to and more importantly we need your contribution we need to hear your voice thank you.

Interview with Dev Anand Teelucksingh and Ajmal Nazir

Dev Anand Teelucksingh: We are now doing the youth exchanges with all 6 groups, what do you think of this year's IGF so far.

Ajmal Nazir: It's interesting this is the first time we are doing this I know we have always wanted to have the youth involved we got a small taste of only two schools participating last year and then the effort was put in this year to make it a little bigger and get the youths involved not just as spectators but as active participants. I am actually very interested in seeing the outcome of this and get some feedback and let's see how we can build upon this.

Dev Anand Teelucksingh: Yes I think it's great that you're really trying to integrate them into the IGF rather than just have them in a separate IGF that some forums try to do. It seems out resources and it gets everyone talking to each other which I think is very critical.

Ajmal Nazir: Yes the danger of the traditional way of having a separate group creates a "them and us" and there's always this barrier, their generation thinking one way and the elder generation thinking in another way there's a disconnect. But with this involvement where everyone is in the same group participation and talking to each other I think it's a lot more collaborative and it breaks down those barriers and enables a more effective communication. What is your view on the IGF being held in South? This is our first time we've decided to host it in South.

Dev Anand Teelucksingh: I think it's great to go to San Fernando for this IGF. We had some unforeseen circumstances challenges with traffic but I don't think it's a problem I would like to see us go into more places in Trinidad and Tobago, if we can find a suitable venue maybe even in Tobago for that matter

Ajmal Nazir: Yes I agree with you maybe next year we can look at central or even if we're more adventurous we can do Tobago or maybe we can speak to the board and float the idea of having a Tobago IGF make sure we get that inclusion, we identify that we need to get the youths involved.

Dev Anand Teelucksingh: If you're really ambitious you can have both Trinidad and Tobago as remote hubs and you can communicate with them remotely. But I am all for going to all places in Trinidad and Tobago to bring the discussions to people.

Ajmal Nazir Definitely and how did you find the panel on "Fake News"?

Dev Anand Teelucksingh: Apart from the technical glitches the panel was good I wish we can spend an entire day on it actually because there are so many things about misinformation and there are so

many things you can talk about like fake science. What's gonna be the impact on things such as deep fakes.

Ajmal Nazir: It is scary in a way that the way fake news and misinformation is getting out there because some people are putting a lot of time and effort so even if you were going to do your research you might find multiple sources staying the same thing.

Dev Anand Teelucksingh Yes especially when you are approaching people with a certain fixated viewpoint on something and you can't debate sensibly on a topic. And I think sometimes "Fake News" tends to get more amplified than the real news/ science

Ajmal Nazir: Which can be very interesting as I said in my opening message, this is an election year we know that there is still some stuff that they are still dealing with from the last election with the whole Cambridge Analytica stuff that was going on but even though we know there's "Fake News" this election year should be interesting maybe in next year's TTIGF we can look at the type of "Fake News" that plays out over this year 2020. We have also got a "Data Hosting" panel later on and that's something that we addressed last year. We got some feedback locally and internationally and it's good to know that it's not only a one-day event it's the stuff that happens and the data hosting/ data protection is one aspect of that.

Dev Anand Teelucksingh I think the challenge is also getting more people to be involved in the MAG so we can do more intersessional stuff rather than just once a year. A Lot of energy goes to this one event but we would really like to do more educational stuff and training. We need more seminars on this stuff but we need more people to be involved.

Ajmal Nazir: Yes building capacity and doing center forums where you can spend more than just an hour and a half on a subject. It's a shame because we have people here who are subject matter experts but we only get one and a half hours to either interact or listen to them and it's a shame when you can spend a whole day and can't ask the questions that you want to ask and discuss.

Dev Anand Teelucksingh: Yes I agree with you

Ajmal Nazir: I think it was two years ago we did a panel on cryptocurrency and after that, the whole market sort of crashed but now it's beginning to gain traction so do you think next year we can look forward to another block changing the world and government decentralization?

Dev Anand Teelucksingh: I don't know I think it all boils down to how do you get paid for your efforts online and whatever solution that comes to solve that issue as easy and frictionless as possible that's going to succeed, but whether it's blockchain or cryptocurrency given the skepticism by most world governments i have my doubts.

Ajmal Nazir: Well let's see what happens over the next few years.

Interview with Albert Daniels and Shernon Osepa

Albert Daniels: My colleague and I are very happy to Comment on TTIGF 2020, my name is Albert Daniels and I am from the Internet Corporation for Assigned Names and Numbers (ICAAN)

Shernon Osepa: My name is Shernon Osepa and I am from The Internet Society (ISOC)

Albert Daniels: One of the reasons why ICAAN is participating here is because ICANN is an international Multistakeholder organization and what we see happening here at this TTIGF is the beginnings and foundations of this Multistakeholder activity where you have different sectors particularly the youth getting involved at a national level.

Shernon Osepa: Yes at the Internet Society we are focusing a lot on development. If you look for example what is happening in Europe and the USA. We do have intelligent people in the Caribbean as well, we do have people who have been quite successful dealing with technology as well. For example, the first person to develop the first search engine in the world was someone from Barbados. When it comes to the global IGF usually the Caribbean would have had theirs beforehand, as such we can show the world what our perception of Internet Governance is. This is why it is important for us to not only talk about things, now we have reached the stage where we can have tangible structures in place. There are a lot of opportunities in the Caribbean which is why we look forward to seeing the youth's contribution to the development of the internet.

Albert Daniels: There is no question that the internet is important to our social and economic development in the Caribbean. And this is the reason why persons from the Caribbean should be participating at the international level at these Multistakeholder discussions. But the problem is right now there is a lack of participation from the Caribbean and right now what the TTMAG is doing here at this TTIFG is getting the young people and persons from different sectors to come together and talk about national issues relating to the internet. This is critically important because coming out of this activity I am sure we will see individuals moving to the next stage, which is participating in international organizations like ICANN and contributing to the formulation of policies that will determine what kind of internet we use for business and enjoyment every day.

Shernon Osepa: One of the other challenges that we are seeing is basically for example, in the room here we have internet access but still, within the community in the wider Caribbean, we do have communities who do not have access to the internet. And this is one of the areas that the internet society is focusing on. How can we get more people connected to the internet? And in this regard, we have been focusing on what we call community networks. You may find for example, people living in a rural area and we work with them in order for them to get connected to the internet because if we

don't have access to the internet, how can we talk about internet governance? We need to first give people access to the internet and once we give them access to the internet, we would like to see people use the internet for productive things not just for social media but in order for them to be productive, for them to conduct online businesses and also fostering that social and economic development.

Albert Daniels: Another very significant aspect of this particular event is the whole issue of sharing of information particularly with the young people. Shernon and I come from international organizations ISOC and ICAAN and there is a lot that happens at the international level that many of the persons in the room today may not be familiar with. For example, in ICAAN we have a program called the "NextGen" program and essentially this program is for travel support for students who are at the secondary and tertiary level to participate in policy development, to learn what happens and the way policies are developed at an international level and then coming out and participating in this event the individuals and students can learn about programs like the "NextGen" program. They can learn about what happens at an international level and they can then be inspired to participate in making these important discussions which would determine what kind of internet they use every day.

Shernon Osepa: One other mechanism that we use at the internet society is what you call "Chapters" so locals, if you would like to get more information regarding what is going on globally you can join the local Chapter in Trinidad and Tobago. And then based on that you can get acquainted with all the discussions going on and how we can make Trinidad and Tobago a better place.

Albert Daniels: We cannot overemphasize the Multistakeholder aspect of the TTIGF. This is very important and it's stemmed from the whole formation of the Trinidad and Tobago Multistakeholder Advisory committee because it's always better when you have a diversity of views contributing to discussions. You have representatives from the government, representatives from business, from the academic community, from end-users and from the technical community. When you have all of these players in the room whatever decision or policy position you end up with has far more legitimacy if one of these players were excluded. So the TTIGF is a very important activity particularly from the perspective of Multistakeholderism and inclusion of diverse perspectives and diverse backgrounds.

Shernon Osepa: Yes I agree with Albert and if you just look at the internet itself it all started with collaboration so the model that we use nowadays is all about collaboration and I think we should use that same model to make for example things better in our own communities as well.

Albert Daniels: We really want to thank our viewers for this opportunity of listening to what we had to say. Congratulations Tracy and congratulations TTMAG for this very important event

Shernon Osepa: Again it has been a pleasure and an honor to be in Trinidad and Tobago. Thank you.

Panel Session 3: Data Hosting: Locally & Internationally

Data Hosting: Locally & Internationally panel (L to R): Mr. Keenan Singh, Mr. Darren Mohammed, Mr Ian Galt, Mr George Gobin (Moderator)

Moderator

George Gobin - Director, TTMAG

Panellists

Ian C. Galt – General Manager, Enterprise Services, Telecommunications Services of Trinidad and Tobago Ltd.

Darren Mohammed – Corporate Business Manager for the Caribbean and Country Representative, Microsoft Trinidad

Keenan Singh - Chief Executive Officer, Airlink Communications Limited

Introduction

To begin the panel discussion, Mr. Gobin introduces himself, he offered his welcome remarks to everyone and introduced the topic of data hosting locally or internationally, what are the pros and cons. He notes that we have assembled a panel that is filled with industry knowledge and requisite experience to approach this subject for you. He then introduces and welcomes each panel member.

Mr. Gobin beings by saying first of all we shall allow the panel to give an overview of this topic and how they intend to approach it. Then we really want to get the audience's participation. I will lay down a caveat for the panel that although they represent major companies within the industry we are not here to compete with each other. We are looking at how we can improve our home in Trinidad and Tobago by allowing people within these industries to make these decisions.

Question from Moderator: Let me start with Ian. Can you give us a short brief on what you think of this topic?

Mr. Galt was of the opinion that it is a great topic he also thinks the timing of the topic is very apt. The industry had moved over the years from a very centralized industry where literally you had mainframe technology and monitors and what was known at the time as dumb monitors and it would be connected at the time to phone lines then over the course of mid-80s / 90s and beyond became a distributed environment so there were fewer mainframes and server technology came in and of course, you have the internet. It has almost gone full circle today where bandwidth is no longer an issue and rather than have a mainframe computer what you now have is cloud and that makes it great for business people and governments. The cost of starting a company or an agency is a lot less because you don't need huge capital investments. He says it's a very good subject matter and we can always discuss local pros and cons overseas or hybrid as the case may be.

Mr. Mohammed acquiecenses that Mr. Galt is absolutely right. He is of the opinion that there is no right answer to data residency there is no answer that says you have to have it here or there he thinks it really depends on the data itself. He describes the way he would approach the topic is to think about which data could be in the public cloud so you can take advantage of the features of the public

cloud, the elasticity, the scalability by then also what data should not be there and what classification should be put on that and if that data should reside within the country may be top-secret data, confidential data, etc. He points out that he would really approach the topic in one of those parameters.

Mr. Singh indicates that when he first started his company they didn't have the luxury of choosing whether they can do it locally or internationally, he says, we had no choice, we had to do it here. And over the years while we've built our structures locally we have actually gotten more exposure to North American data centers. And personally, I think we did well but now seeing what North America has to offer and what other Caribbean islands have to offer really shows that we have a long way to go. I wish that when I started there was the presence of infrastructure that we can make use of but unfortunately they were our competitor and they wouldn't have it so we had no choice but to build. But now the dynamics have changed quite a bit where you have a choice. And this is something we will be getting into more in-depth.

Moderator: Hosting data locally and internationally, let uss talk about the pros.

Mr. Galt observes that if you look at the economy today the foreign exchange would be one hindrance. He gave the example, if you're a businessman and assuming you have made the decision that on-premise is not the way to go and you prefer to own and run with your own equipment you would put it on a cloud. He thinks that another benefit to the country is supporting a local industry that has taken the time and investment to invest in facilities as opposed to money that is going somewhere else. He noted that there will be less communication cost of hosting it locally than internationally. Maybe the cost of the service overall might be less on one hand but net-net with communications would be very cost-effective. Personally, I would say these are the main pros.

Mr. Singh reckons that the biggest pro to him would be the people of Trinidad and Tobago. He verbalized that Trinidadians and the younger generation are often criticized but his team is very young and they have gone to leaps and bounds. He says, I think of our next generation because these are the guys who will be writing the next code, who will be building Apps and putting Trinidad on the map. I have seen many Trinidadians migrate because there is a lack of opportunities locally and if we

could find a way to tap that, find a way to keep them here, and keep them engaged Trinidad could develop greatly.

Mr. Mohammed explained that local includes on-premise within customer's data centers and then local hosting by way of the local data centers here by a provider locally. He discussed that there are customers who when they classify the data and the data is classified as strictly confidential or of threat to organization or threat to the economy if it was ever released, that type of data should not leave the country. He explains that when you classify data like that you have to think about at rest or storage, in transit where does it go to if you are able to communicate it and you have to think of the processing of that data. All of this has to be done locally if you think of it in that way. And the second advantage we have seen recently is local hosters can be billed in TTD if it is classified in that way, your profits are now local so you can go to a local provider and pay for these cloud services in TTD.

Mr. Gobin pondered on the cloud movement he stated that when the cloud movement started about 10 years ago the typical reasons why it was suggested to make use of were reasons such as, we won't have to manage our own hardware, our operations team would be sitting elsewhere, we were saving real estate, etc he says, all these elements of IT costs were now going to be far removed. We neglected to tell those customers that by outsourcing your IT data centers the management or the relationship between the provider and yourself still needs to exist. Somebody needed to manage that provider and that's something that we have seen as not happening in the industry. He observed that people see things happening and they say that's their problem whatever goes wrong it's their problem, they have to fix it when it's not necessarily so and he sees that as one of the main things to look alongside whilst discussing pros and cons. He mentions that the other side of that coin is if you're looking at international hosting as opposed to local hosting you have to provide your own technical expertise to do something so if you have a network hack or a breach problem you throw your staff to deal with that problem and try and solve it. He stated that when you look at most companies in Trinidad today, there's usually a 1.5 system administrator who is doing many things besides looking at cybersecurity attacks. He noted that the larger companies abroad such as Google IBM Microsoft, control 5000 engineers at an issue he states that this is one of the things we have to look at when considering internationally.

Question from the Moderator: Keenan your thoughts on the cons of international hosting?

Mr. Singh reminisced that one of the challenges his company faced whilst advertising their Data Centre services was that most local companies don't really understand what they do. He says what we are selling is space, which encompasses a rack with cooling, power, and remote hands but most businesses think that we are going to manage the entire IT infrastructure for them when that is not necessarily the case. You still have to load your servers, manage them and license them and that's a big gap for us. Now when we look at the grander scale of things, our population consists of approx 1.2 million people. He suggests that if we were to take everyone's data in this whole country including Google, Facebook etc it would be able to fit it into maybe one rack or one cabinet or perhaps two with new technology. He observes that we presently have 8 or 9 Data Centres in Trinidad, he asks if we are focusing on just locally, how are we going to fill those spaces with customers, we have to look internationally and that's when the challenge comes in if we start looking internationally and you ask someone else in the Caribbean for hosting they ask "Why should I come to Trinidad, why shouldn't I go to the US?" he says he has also had the question asked "Why should I host my website on your Data Centre when I can pay "GoDaddy" $3USD/ month.

Mr. Mohammed, focusing on the pros of hosting internationally returned the conversation to data classification, to talk about the benefits. He reckons that when you think about being able to innovate and being able to do big things as an organization you begin to think ok what about if you had access to limitless computer power or limitless data storage. So the first thing he points out is scalability, with the public cloud he observed, you can scale out as big as you can imagine, the other thing is that with a public cloud provider, its economies of scale, they will have deeper pockets and will therefore be able to offer those services on a large scale at a cheaper cost so the second one is the cost of the service. The third thing he acknowledges is that with the deeper pockets they are also able to invest billions of dollars into cybersecurity and also into meeting international compliance standards. He gives the example of GDPR he illustrates the idea that if you have to meet GDPR the cost of implementing GDPR is enormous because you would have to have the capability within the technology to detect or erase a person's data in every way that that data exists or you have to have the ability to notify a user that their data was breached within 48 hours so you have to have the technology to do that. He posited that with these big investments the internet providers will be able

to give you that capability as part of the service. He is of the position that the de facto should be using the public cloud when you can when there's no limitation and then use the private or in-house on premises where there is a need or when there is a risk.

Question from Moderator: Ian those advantages that the international hosters brought to the table initially have more or less disappeared by now in terms of scalability and elasticity, what I've read of your Tier 3 Data Centre at TSTT, they have eliminated a lot of those kinds of advantages /disadvantages the problem is still volumes to justify the investment. What are your thoughts on this?

Mr. Galt perceives that like everything else this relates to "fit for purpose" and he determined that it depends on the size of the businesses and the type of service you want to be done. He is of the notion that if you look into going offshore it depends on what you want. Referring to Mr. Singh's point, Mr Galt suggests that the folks who want to pay, $3 or $5 to host something in "Go Daddy" and so forth obviously that's a subscription where you're not going to get any value-add services but it really depends on what it is you're looking for. Ultimately for most organizations, it's either going to be local or as Mr. Mohammed said a hybrid. He mentions that you'll hear people referring to the nearshore and offshore for additional resilience. To Mr. Gobin's point he explains that it is also about who has a formal tiered structure and there are people who will say well they have a Tier two or Tier three design. However, there is a big difference between a Tier three design and a Tier three Data Centre. He divulged that there really are about two companies in the world who have become the defacto standard of judging Data Centres they are Uptime and TIA. He explains that sometimes Data Centres are referred by certification he explains that these certifications mean something to the big four who will help companies typically make decisions. And then for even more complexity he explains, this would be considered arguably approved for overseas or for the people who have taken the investment locally. It isn't just about the facility that is tiered but it is the infrastructure, it is about the people and process tools because a Data Centre is not just about a building it is about the people that run it. Its about the processes, it's about the audit and it's about the constant reinvestment. He shares an example, with his company who had just gone through the process to renew their Tier three status which will run until roughly about 2022, he explains that if companies stop or slow down that investment, over time they will lose it. He illustrates that some companies depending on the size, the

corporate Caribbean government will want to insist on that tiered structure other companies maybe the SME corporate may say it doesn't make a difference to them. One thing he thinks should be discussed fairly is the subject in terms of what should be off or what should be on. He explains that we also have to understand that our legislation in Trinidad, doesn't allow as yet for a lot of government data to reside outside of Trinidad and Tobago. He gives the example of criminal records. He explains that our legislation would not allow for that to sit in the lap of the America's. If the legislation is changed then it would. So there are pros and cons for both. Assuming there is a formality with the tiers Mr. Galt agrees that hybrid makes sense but there is still a certain amount of data in which legally its not possible to house outside of Trinidad and Tobago just yet.

Question from Moderator: Ian you mentioned Uptime and TIA can you mention what these are for the benefit of the audience?

Mr. Galt explains that these are bodies that have developed this certification Tier I through Tier 5 and in addition to the obvious stuff such as the security, the resilience etc what it boils down to is what uptime am I paying per year. The difference between Tier 1 & Tier 5 is that with Tier 5 it is 100% where you are guaranteed and it will be written into an SLA that if that fails there will be penalties attached. He also explains that obviously, Tier 4 will come to x minutes per year Tier 3, etc. So many times with a company it comes down to what would happen if my company had information in the cloud and I couldn't access it for around 6/8 hours. For some companies, it won't be a problem whereas for some companies in Trinidad he explains, if they can't access their data for an 8 hour working day the impact on their bottom line would exceed a million dollars so for them they are prepared to pay more because they would like to ensure that, that doesn't happen to them. Effectively Uptime and TIA are two companies who recognize that when they say yes I can put my rubber stamp on this for two years people can effectively take that to the bank as a guarantee and say yes I'm happy to deal with this company based on that.

Question from the Moderator: Keenan can you tell us how the regulations have been affecting your business in Trinidad?

Mr. Singh explains that you really need three main components for a Data Centre: they are base, power, and connectivity. He illustrates that a Data Centre is similar to a battery. He explained that you take power and connectivity into the building or data centre and you process that raw material if you want to call it that and you deliver a product. It's just that this product delivered is not a physical product per se it's a digital product. For example, a website, voice or IP service, or it's an OTT service or whatever have we. He explains that while the Data Centre space is not regulated in Trinidad, the telecom space is and what you find is that a lot of telecom providers own and operate Data Centre services so it goes interchangeably. He noted that our regulatory environment is not as open because having been to Guyana, other places in the Caribbean, and North America and doing business there and it's way easier for his company to get things done. He explains that because of the geography of Trinidad, we are located south of the hurricane belt so we have cheap power, we have a very talented workforce compared to the other islands and Latin America and there are certain geographic benefits of being in Trinidad. One of them being LEOS. The LEOS market which is a Low Earth Orbit Satellite. Being developed by SpaceX and OneWeb. He illustrates that these companies need to build an access network across the entire globe that they can uplink to their satellites and provide connectivity to the globe. Mr. Singh posited that their idea was proposed to the regulator in Trinidad, but was blocked. He observed that we have these opportunities for foreign exchange but because regulation seems to be a hindrance. He illustrates, I mean I can sell you a box, I can sell you space but if I can't connect you back to your network or if I can't provide that last mile or that last piece to you basically all I'm selling to you is a box that has connectivity. If you now want to connect that box to their satellite we can't do it and the long story short is that the Guyana market has opened up to it and they are doing that but Trinidad and Tobago unfortunately because of our regulatory framework it's not.

Question from the Moderator: So Darren have any of these regulations affected your business model?

Mr. Mohammed affirms that he and his team at Microsoft have been big advocates of the Data Protection Act and mentions that he and his company believe that there is a significant need for all jurisdictions to have a data protection act and it goes beyond regulating big companies or small ones. He explains that regulations are there to protect you. He illustrates an example, let's say your ATM card was skimmed. Is there a regulation that says that the bank has to look back at all the people who

used that ATM machine and contact them and say well your card was breached? No, we do not have that regulation yet but, we count on the good nature of the banking system to do that. Now if you think about a company that has something to lose if it was found they were breached they could hide or be tempted to hide that fact and not notify anyone and just move along. And we think that is not right and we think that all jurisdictions must implement a proper Data Protection Act to protect the data and to protect you.

Moderator: So Darren is actually going off in a direction that is going to be subject of the next TTMAG seminar which is data privacy and our links to the GDPR system. Shall we get some questions from the audience?

Q&A

Cindy Ramsook, Strategic IT and Project Management Consultant.
My question is going to be what are the inhibitors to us actually adopting some form of cloud solution in the local context. I heard Keenan talk about regulation and I heard Ian talk about legislation. I'd like to talk about what else.

KS so let me give you a real world example, five years ago we hosted our own emails, our own data back ups our own cloud, our own stuff and we can do it quite easily because we own a Data Centre but as the years go by, we realize we're not doing things as effectively as we should and there are things we can be doing better so we started looking. One of our options was office 365 and one of the options was Google so unfortunately Darren we didn't go with 365 we went with Google but we paid $5US per month per user and we were able to get the entire service done in the cloud now we are a local data center provider so you would think that we would want to do it ourselves but we realize the value that comes with going with a cloud based /Google based platform. Because we don't have the capacity to build all these things ourselves so we had to go to either Google or office 365 and alot of companies in Trinidad and Tobago do go in that way because it's just easier for them. It's easier for them to rather than have to manage the box, manage everything that goes into that box than to just pay Google or Microsoft just $5/user so that is one of our biggest challenges of hosting locally is that unless we build the capability unless there is some young entrepreneur here in this country or in this

school that can build something to compete against Google or Microsoft where it's just the cheaper way to go.

IG I just wanted to get some clarity on the question

Cindy Ramsook, Strategic IT and Project Management Consultant.
What I'm really looking for, is there any reason why we cannot do this properly, completely and wholly within the local context. We have been doing alot of cloud or cloud based solutions but it has always primarily been with an external provider. We have a lot of organizations who are adopting an international multinational body to deliver some of those services and I'm trying to figure out why we can't do that ourselves like a dystopia,

IG I don't say this facetiously I've agreed with George to not plug my company, let me just say that, but when we built our facility, it depends on the market that you aim for there are multiple data centers in Trinidad and people aim for different markets we have absolutely aimed for the international corporate market and that's exactly why we have gone through the very onerous and tedious but worthwhile tiered rating because that rating allows us to go anywhere in the region or world. And what we're doing let's be perfectly frank and when I say we I mean all of us, it's commoditized so let's be an inhibitor. To Keenan point he is absolutely right, we will also do white labeling, what he referred to is white labeling, you take office 365 or Google or whatever and you white label it as yours. The backend engine, development, support, comes from the originator but in terms of an inhibitor, I'm very proud to say we have competed internationally in the last year we have won business away from international providers and it is delivered locally. To Keenan's point, local persons with resilience, which meet the standards anywhere else. Trinidad one of our advantages is economies of scale I certainly think that for an island of our twin island state size I think we have alot of brain power a lot of talent, you have people like Keenan at age 17 founding his own company so I think the talent is there and I think the companies who want to invest in Trinidad and not this "well its Trinidad" if I'm going to compete on the global scale I will and personally I don't think there is an inhibitor at least for the market we're aiming at we're very pleased to say that we've been able to go out there and compete on a leveled playing field and win.

Kevon Swift, Latin American and Caribbean Internet Address Registry (LACNIC)
I wanted to go back to the question of data classification and the example of criminal data. I found that interesting because I'm not sure if our National Security and justice apparata would be keen on seeing that hosted offshore per se.

IG I'm sorry I don't know if I made myself clear so that would be a case that could not in any way should not in any way shape or form be hosted offshore is what I've said.

Kevon Swift, Latin American and Caribbean Internet Address Registry (LACNIC)
But staying away from the legislative mechanisms because that's a different topic altogether, what would you say would be the safeguards to customers who want to have data hosting and you are thinking of having your host in the US but they will be subject to things like the USA Patriot Act which are non technical issues that could have a serious impact on the businesses they are trying to support?

IG great question many times and I can only speak for our client base, many times with our client base people will want, so although we have resilience here, it would be okay but a lot of people will say well I want what is sometimes called near-shore/offshore, we've had clients who say I don't want to run any risks with the Patriot Act they could look at the ABC Islands, Bahamas, Cayman, Europe, Canada, so while we have sub sea fiber that runs into the US, if u look at our rings we could host it in another Caribbean island, or in Central America, for people who say I don't want my data on US soil for whatever reason.

Kevon Swift, Latin American and Caribbean Internet Address Registry (LACNIC)
I'm just being very inquisitive here, these alternatives, do they incur different costs because I'm thinking they have different administrative costs. You mentioned Europe and therefore you need to ensure GDPR compliance so these are different costs that the customer will have to bear?

IG correct if a customer came to us and specified the first thing we would need to do is look and say okay fine locally there is a tier three is a tier three good for you or are you prepared to say realities and this is a safety net so I'm prepared to go tier two, and then we would say okay fine so here are

your options in terms of our umbrella and depending on where that is you're absolutely right, there would be different costs, obviously Europe might be a higher cost space, Central America might be a lower cost space so yes there would be different costs.

Nigel Cassimere, Caribbean Telecommunications Union

To bring a question from a government perspective, we are talking about hosting locally vs internationally. Are there any government services or data that you can think of that might be available to hosting anywhere else other than locally? And maybe you can discuss some of your experiences in interfacing with governments over their services or data because I guess in trying to determine if this is an academic question for governments or not or whether there is some other advice we can suggest to them.

DM so for government data I'll give an example of the UK, so the UK had 6 data classifications and then they realized that having 6 data classifications made things very complex so they reduced it to three. The three are official, secret and top secret. And official is if the data was leaked you know no riot no loss of economy nothing like that but it is government known data. They allowed official data to be hosted in a public cloud through protected services that you would buy from any global cloud provider then at secret and top secret had to be either on premise at their data centre's or within an authorized data Centre where they can guarantee that the data at rest in transit and in processing would never leave the territory. When they worked out all the data and what classification they had to apply official data which is data they could host in a public cloud was 90% secret and top secret totalled 10% and I would expect that that applies to any government. When you think about the data that any government has right now even through the freedom of information act it is supposed to be open to the public, itf it was leaked it would be okay so you can take advantage of all the protection, security, iso standards all those things because you know maybe it's more secure there. So that 90-10 I think would apply to governments.

GG I also thought that governments in the Caribbean had a plan in the last 5years maybe about open data where you made government data available to anybody who wants to demand planning, city planning depending on how people migrated from rural to urban areas vice versa that open data can

reside anywhere there is no restriction about where you host those kinds of things I would think that is another example cause you've made it open to the public.

Albert Daniels, Internet Corporation for Assigned Names and Numbers (ICAAN)
We know that when it comes to financial transactions that there are certain technologies that can be implemented to help with different types of attacks like for example man in the middle attacks so for example DNS SEC domain names systems security extensions can help between the end user and the ISP and the authoritative source of the financial data. Can each of you speak a little bit about the data in transit. It seems like we are hearing when it's with you. It's very safe and very secure. What are some of the risks when that data is in transit between you and the end user?

IG probably in our case it's a little different in so much as we provide communication links and we have a Data Centre but that doesn't mean any Data Centre of any consequence will have all providers coming in it would be very naive of us and very myopic if only our customers who had our links came into our facility. We welcome all providers and we think that gives freedom of choice and resilience to customers so i would say in terms of a provider that has the links I would say the risk to data comes at three points. You start with the client site you have obviously got the links and then you've got the data Centre. For example let's say Company x and they used our links and they used our data Centre. Our network is in a constant state of upgrade for encryption etc. Let's be honest at the end of the day humans try to infiltrate and humans guard so at the end of the day is it impossible for someone's data to be mined I would say no but I would say depending on again the type of facility where if you've got the processes, the security the people the infrastructure then I would say in a Data Centre there is a higher probability that the data is safer like I say in terms of our networks I can't speak for other companies ours is in a constant state of upgrade for encryption to protect that but you've got that. Whether it's at an ATM or whether you're sitting at your laptop in rituals hackers are constantly there and that's where I would encourage companies, depending on the size of the company and the sensitivity of the data, that's where firewall technology comes in for companies of a certain size I would say it makes sense to have some form of SLA so they can have penetration tests done to ensure and give them alerts or even go to a company that specializes in security that they don't have to look for breeches but the company will provide that service to them.

KS this is really where partnerships come in for example with us we don't have the resources or the expertise to provide that end to end encryption but what we can provide is a space that is safe that is closer to the customer. For example in a case like ours we may partner with Darren from Microsoft and tell Microsoft we have this secure space that we can provide you with connectivity and cooling and you can install your appliances or your boxes there so we would benefit in terms of the rental for that real estate and Microsoft would benefit from getting the end user and being able to be closer to that end user. There is alot of companies that try not to get their foot wet in both so for example Equinix, Equinix only provides Data Centre Services but they partner with hundred of thousands of other companies to provide other services but they don't sell it because I think in this type of industry you can be really good at one thing or bad at many and that's really where we come in. We try to focus on what we are good at. We'll sell you a pipe and the pipe is completely open. It's your responsibility or it's the customer's responsibility to put whatever security they want to put on there. Because if we try to circumvent that then there are some legal requirements as well because as an ISP we cannot intercept anybody's data or try to manipulate it in any way.

DM Data in transit. Encryption is the answer. We encrypt at rest, in transit and in processing. I know we're talking about in general in the cloud but I want to break it down into infrastructure as a service, platform as a service and then software as a service. When you think of a technology you have to think from the ground up would be the network, the network is connected to the server, the server then provides resources and then you go into things like identity access like who controls the login reset passwords those types of services all the way up so in infrastructure as a service we basically provide a big Data Center that meets ISO standards and the network but you create a VM and put it in our Data Center you have to manage your VM and the security of your VM, we will manage the protection of the network because that is what you sourced to us. We will manage the protection of the network, the box, the physical security, all those things. When you get to a platform or a service we will take another role where now we will manage the security of the actual platform itself and the actual processing. Things like the dot net framework, the web technologies all those things, we'll protect that we'll patch it you outsource that to us and then you'll take responsibility for the actual website and the app. And then when you get to software services like office 365 we manage everything so you just buy the service and you have email so email is your service. The thing with that is the fact that we can invest so much allows us to do things that a regular operator can't do. A very

simple example is with email attachments, we detonate them in a controlled environment, if we detect that, that attachment is malware we look through all globally and where that attachment exists we wipe out that malware globally from our services if you had that in let's say a government office and you found this malware you would have to ask, does anyone else have this malware and then move throughout. It's because we have deep pockets and that's what you outsource to us. So there's an advantage to that. Keep in mind the three clouds and what you outsource to us and then what level of protection that you have in each one the three.

Jacqueline Morris, Internet Society Trinidad and Tobago (ISOC)
How does it affect your businesses? The fact that the national cloud policy has not yet been approved by the cabinet with regard to how you guys are working with the government.

KS I would rather not answer.

DM for us we partnered with the government and gave inputs on the cloud policy, we act as if the cloud policy is enacted and we made sure that our services met the standards for the way that it was written. It follows a lot of the GDPR honestly and that's a great thing for us because that is the gold standard for privacy compliance, transparency and security. The thing I would say about it is that it needs to be passed. you will find that once you have built your system for GDPR which we did. Microsoft took the GDPR and we said it was not for EU but it was for all because we felt like it was the gold standard so in Trinidad and Tobago customers of our services actually receive GDPR compliance we don't say well hey I won't take the risk because it's not enacted so when we did that it allowed us to act as though it were enacted and when we scanned it we met pretty much a good bit of it and we'll continue to give inputs as to where we are invited to because we want it to pass.

IG I would say that it really hasn't affected us I do agree that it needs to be passed but our view is that for government agencies they would have needs much like Darren we make the assumption that this will be passed and therefore we are ready for it but I would say that it really hasn't gotten to the point or stopped us from providing a service. If we're ever in doubt as to whether this is data, hypothetically if someone wanted nearshore offshore and we're in doubt as to whether that is possible we'll

obviously raise it and say no we can only go local and give full resilience local but that hasn't inhibited us in any way.

GG so Jacqueline as you know there are other instances of things like data protection that has not been enabled or acclaimed yet from the parliament that hasn't stopped a lot of the things that need to happen in Trinidad and Tobago we don't have the fines and stuff in place yet but I guess it has to come if we want to be where we want to be.

Jacqueline Morris, Internet Society Trinidad and Tobago (ISOC)
So just for clarification there's nothing that you guys can offer the government to help the government move forward that is being held back by this lack of the approval of the cloud policy or are we pretty much having everything you can offer for the national going forward?

IG to Darren where we have been asked for input we give as much free advice, consultation as we can but it's always on the basis if asked to contribute we certainly do.

GG I think that just like with other vendors and governments in other countries you can give advice but it also has to be receptive on the other side of the ball so if it's not being received or its not a priority then it falls by the wayside

Question: I really appreciate the growth of Airlink. I have looked at the growth over the years and I am shocked that you did not answer the question because I would really like to hear your comment on the question. For us to develop the capacity in the region companies like Airlink and who have chosen to adopt next generation technology such as Low Orbit Satellite etc there needs to be an encouraging and enabling environment for companies like that to progress because if you look at this globally and you guys speak about being globally competitive Low Orbiting Satellites and technology along that line is the way to the future and companies like Airlink who have decided to step out and go down that road I think should be given the opportunity and businesses which will essentially drive the market. Because if the businesses represented here decide today that listen because we want to get to the underserved communities across the region we are going to use people like Airlink and what they want to do. You'll see things like legislation and politicians and the

whole like changing. So my question to the four gentlemen is that how do we for one enable research and development into new emerging technologies if each one of you can explain to us how over the last three years new and emerging technologies in your business and how are you integrating them.

KS I would like to start by saying thank you. Really to answer your question the government just has to step out of the way I have said this on many occasions. This is my personal belief, if Elon musk was a Trinidadian he would have been arrested and jailed because this country just does not foster innovation. The Panorama is the perfect example of how it left Trinidad and took on a new life in Greece. To answer your question, what we have done is we haven't stopped. We have actually set up shop in North America and we are doing everything that we were told we can't do here, we're doing it there. So it has not stopped us but as a Trinidadian I would like to see my country grow and I would like to see this country benefit. The Americans shouldn't benefit because this is coming from here, this should remain here this should be our focus as a country and I should not have to leave Trinidad and Tobago to go to the US to develop this type of technology. Also to answer your questions simply the government just needs to step out of the way because they are just putting up more barriers than anything else and we have seen it not just from the regulators point of view but even from the government as a whole because we have written to the ministers and government officials as high as you can go and they just don't seem to care

Moderator: Any closing remarks gentlemen?

Ian Galt: I'm just going to use the last gentleman's question for the closing comments. I do think that there is innovation taking place and I'd like to give and example with us, we provide software as a service that is software that we have developed over the past ten years and it is specific to procurement we have registered users around the world I think our last count was like 1200 or something like that so I do believe there is innovation and I can tell you as a provider with local people doing development and hosting it in our facility and so on I do believe development is there I think It could be better in and that's where the government may be able to come in and offer incentives. If you look in the 1990s the government of Barbados had a huge offshore it developer set up, I think at one stage they were in excess of two thousand developers there, they gave tax incentives to companies and at one stage in Barbados believe it or not but there was an Intel factory it was all based on

incentive so I think there is a lot of innovation here, could it be more could be better yes who knows, we have general elections this year and both parties are focused on that right now let's hope at the end of the year we have a government that recognizes what IT can do for the country in terms of development.

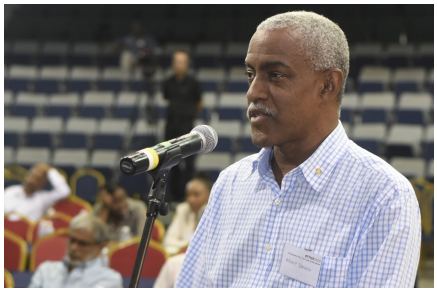
Darren Mohammed honestly I think it is the best time in the history of humankind to innovate I think when you think of platform as a service which is the ability for us to provide things like artificial intelligence or a database that is distributed across the globe the sky's the limit of what any Trinidadian national can dream of because they have this technology in their generation and at their fingertips so when you think about how do we foster that information it goes back to a lot of the work that people are doing on the ground to build out and encourage students to get into the STEM/STEAM field to get into coding to be able to understand technology and if you pair it up with the power of just by going online and signing up for an account immediately you can scale your application to across the globe. All that's limiting them is just the skills in which we need to work on and the encouragement which as parents we all have to work on but then the barrier of the technology is gone and we live in a great time for that.

Keenan Singh for me the question was locally or internationally and my heart is locally and I still believe that we have the best potential, that we have the people of this country are the brightest and the most innovative and we just have to find a way to tap into that untapped potential and I think this could be the bigger than oil for us, but now that the oil has passed what is the next thing for Trinidad and Tobago. For me really it's the people, and we'll just build the infrastructure we just need to bring young minds to fill there.

Conclusion

George Gobin mentioned to Mr. Ian, that he brought back some memories there when he thinks about the number of people we lost in the 80s and this company in Barbados we all lost Trinidad based resources to move over to Barbados and they were well taken care of because of the incentives that the Barbados government offered to that venture. Thank you gentlemen for your time and the industry experience that you have brought to the table.

Open Forum



Panellists: George Gobin, Professor Patrick Hosein, Robert Martinez, Ajmal Nazir, Devanand Telucksingh, Ravindra Danny Jaggernath, Anita Sohan and Dev Gosien (host).

Introduction Mr. Hackshaw introduced the discussion with how the open forum works or for those who are not familiar with it. The panellists will be fielding some questions from the audience, who are free to just comment on topics, for example, we have burning issues from before, feel free to raise them.

The issues you would like to ask are questions that can be on topics of internet governance, ICT, however we are not the Government of Trinidad and Tobago, so I don't think you can ask questions on ICT policy, but you can make an observation or suggestion if you like.

Discussion:

Nigel Cassimir in response to Tracy Hackshaw, as an item of feedback:

- It was a good idea to move the TTIGF to a school environment where it was possible to have student participation and input.

-Mr. Cassimir suggested encouraging more tertiary education communities, as well as to move the forum location through Trinidad and maybe Tobago in future using some of the technology observations.

- Mr. Cassimir commented It was refreshing to see the event held in a different place with a conscious effort of engaging a different audience.

Tracey Hacksaw (in response to Nigel):

- Acknowledged Raj Ramdass from RC International who worked tirelessly to get school, as well as some of the youth leaders, also members from our TTMAG who would have helped with getting the youth leaders including Professor Hussain and Sanjay Bahadoorsingh.

-Mr. Hacksaw indicated that the tertiary issues are a challenge, because we did reach out to tertiary institutions primarily, but we did not have them here today to a large extent which we would like to fix.

-Mr. Hackhsaw commented on the Universities keep saying they have classes and exams, however suggested it is not hard to take a day off and come and interact with everyone else, why not.

George Gobin:

-Asks Demeece to brief everyone on school they have visited in the last quarter and the names of the schools and commented that she is of great asset the company cannot do without.

Demeece (in response to George Gobin):

-We have done Latchmi Girls and Asja Girls Tunapuna

- Did not physically do the presentation in south Debe but had sent the presentation to the school and that most of them are here today.

Jacqueline Morris commented on IGF:

- People think of the IGF as once annually, but really we want people to recognize that it is a process involving conversation, interaction and collaboration all working towards identifying problems and issues that the public has with respect to the internet that do not fit into the narrow technical remit of the ICAN, ITF etc. .

-Question by Ms. Morris: "How do we work to keep the conversations going and this can then lead lead seamlessly into the next highlight event"

-Ms. Morris indicated that the problem is that most of the work should be done during the year and not just once annually. It is not just an event.

Ajmal Nazir (in response to Jacqueline):

-What Jacqueline is saying is that IGF occurs once a year and nothing happens in between that until the next year which we recognise, and it should not be like that.

-We recognise this problem. This is our 4th IGF and we have started to put measures in place and start thinking about how we do things in-between.

-Mr. Nazir indicated last year we did the GDPR or the data protection. There were activities that happened during last year and as part of that as the conversations took place in the IGF we did further work.

-Two of our members were in Barbados two days ago, relating to that, it got us the audience and presence in those events.

-Mr. Nazir indicated that this year we are planning to put more effort to continue with the work we are doing here, maybe have more events or other days we can get together and progress.

-Mr. Nazir commented in terms of getting more people involved, it is resource intensive, people have to allocate time, and again the TTMAG is growing as also the IGF or TTIGF is growing, we are getting more people interested, more people want to contribute.
-Mr. Nazir suggested In order to execute what we are looking at is how you can get external people/groups involved and give them some projects which they can basically work on and push the initiative.

Ravindra Jaggernath (in response to Jacqueline):
[relates conversation between him and Gobin following the GDPR forum in Barbados last two days ago but had not discussed it as a board as yet]
-Mr. Jaggernath commented that we recognise there is a gaping hole in terms of the whole awareness of GDPR and implications in Trinidad.
-Mr. Jaggernath recommended to the board, let us have an outreach session sometime soon where we can get experts who can talk about GDP, GDPR and also get the respective communities in Trinidad, including the legal profession, business sectors to come and understand how things is going to impact on the companies within Trinidad and what we can collectively do.

Albert Daniels (ICANN)
-Commented directed to the panellist "when you stand like this at the 4th TTIGF, I mean apart from the fact that you look nice in your white shirts, it's easier to see that there has been some change on the TTMAG, so my question is not only to the current directors but it includes the responses from your previous at least I see one director sitting in the audience".
-Mr. Daniels commented on 32 territories in the Caribbean with ICANN using TTMAG as a shining example of a multistakeholder advisory group many times throughout the Caribbean.
Mr. Daniels suggested this is how you should do it. Do like TTMAG, form a multistakeholder group to guide your internet discussions.
Question by Mr. Daniels: "does anyone have any experience they can speak about relating to helping other countries do what you have done here in the TTMAG or you got any other requests from any other countries for assistance to form something like the TTMAG".

Ajmal Nazir (in response to Albert Daniels):

-Thank you for recognising our good work. We are a working process, learning from our mistakes, we are going out there and seeing how the people are running their TTMAG and learning from them.
In terms of helping the region we have had these discussions and we are definitely open to helping them.
-We received an invitation two or three years ago from Grenada through my (Nazir's) professional link as an ISP Grenada. The NTRC in discussions asked us for assistance in setting up a MAG for them which we did offer, but then we weren't sure if there was a change in agenda or what had happened. The offer was not taken up, however suggested maybe we should reach out again or assist with them.
Mr. Nazir indicated they are definitely open for any regional imitative or anybody that wants to set up a MAG we can tell them what has worked for us, where the challenges are for us and they can learn from us and we can support them with any tool kits momentarily that we have.

-Dev Gosein (also in response to A. Daniels):
-Thank you for your recognition Albert.
- Mr. Gobin commented, for the couple IGFs I have attended, I tried to sell the model because it is not propagated throughout the region. Also you have to go slow and easy.
Mr. Gobin commented that he took the mike to indicate that " there is nothing that we do in the MAG that is a secret we are willing to share".

Marie O'Brien (representing GDG in Women Tech makers in the Google communities here today.
- "One of our focus this year will be "mental health in the technology industry"
-Ms. O'Brien suggested that when TTIGF plan their agenda consider some of the mental health experiences with people in your community, most of us in the development and technology community have very tech heavy lives which does have a mental health impact.
-Ms. O'Brien indicated that health impact don't come up in her international conference discussions, also she asked the panel if it comes up in their discussions. She felt as if it is almost taboo to bring up.
-Ms. O'Brien wanted to know what work they will be doing in diversity and inclusion in their events if they have no plans suggested maybe considering it as a focus in their discussions as they try as a global community to work on these areas.

Ajmal Nazir (in response to O'Brien)

-Mental health and IT is a large scope beginning at social media and users and ending at IT personnel

-My backbone is very technical. An ISP network needs to be running 24/7, thus we have a team of core engineers (4-5 people) who know the network inside and out and are thus always on call. Furthermore, most of the proactive work you do needs to be done at a time that minimizes interruptions 2-5am. This disturbs sleep patterns and puts the Technicians in a high pressure situation. But it is not so easy to recognise these negative impacts, especially when one is younger and vibrant.

-There are always members who would be anxious and stressed out, suffering from sleep deprivation and lack of social time with their family.

-The job is very demanding especially if the network goes down. We tell ourselves that this is the profession we choose. It does take a toll and I have discussed with colleagues the future impacts of our work conditions and high pressure environment.

Jacqueline Morris (in response to O'Brien):

-On the topic of IT, ICT, internet and mental health: I think a lot of people have a concern of victimization, such as not renewing contracts, and stigmatization if they come forward.

-Ms Morris suggested that perhaps we need an anonymised way to disclose issues so that awareness can be increased until people can recognize that these are not isolated cases, but an issue within the industry, -We can attempt to identify stressors in the field and try to resolve or reduce them through discussions.

In response to O'Brien:

-I want to add to the topic of Mental Health because it is something I have observed a lot myself.

My advice to young technicians is: It's okay to just step away from the keyboard or the server room. Take a nice long walk and just breathe. Sometimes this is all it takes to prevent a breakdown and stress. Just walk away.

George Gobin: (commented to Nigel Cassimir question or issue).

-Mr. Gobin commented at the end of the day all of us are volunteers and these kinds of events are funded by different organisations and we have to go out and ask for those donations.

-We try to make the IGFs session free as that is a governing rule from the world bodies, so we will continue to strive to do that, the fact that we are having one in south, we thought about it, this was an unserved community in a type of way nothing is ever happening in south or that people from south don't attend events in north and people from north don't attend events in south which is just a territorial geographic thing.

-Mr. Gobin commented that we are trying to move the conversations around to those communities that don't have a chance or a voice.

-Mr. Gobin indicated audience participation is key as we go along. To answer someone else's question we are thinking about doing GDPR, data privacy, internet governance and governance itself as we go along this thing.

- Coming out of this morning session as Danny said we are looking at doing a half-day session on maybe just GDPR, CDPR etc.

Maria O'Brien (response to George Gobin)

-Maria suggested instead of a half-day session why not a two-day session on privacy, because in Trinidad there is a problem with national websites and national service sites issues that are visible.

Ms O'Brien commented on missing the Barbados session and if we can have something like that here where there is a full industry sensitization about privacy issues that can be live stream.

George Gobin (in response to Ms. O'Brien)

- Two things we want you to take away are: www.mag.tt, join and keep abreast of the events we are having

-The specific website we are having for this type of event is igf.tt, please put that as your favourites

-wwwnic.tt, another major sponsor and partner of this event. Dr. Patrick Hosein who is the administrator for the CCTL league or the board that manages the dot domain.

Closing Remarks

TTMAG Board of Directors

In wrapping up the 4th TTIGF, Mr Tracy Hackshaw, then Chair Elect of the TTMAG offered thanks and appreciation to the organisers, contributors, sponsors, attendees and supporting partners.

In his vote of thanks, a save-the-date for the 5th TTIGF to be held on Jan 29th 2021 was also announced at a venue to be decided. There was also an acknowledgement for all the participants/attendees, students and teachers and schools who had representation at the event with students from:

- ASJA Girls College
- Debe High School
- Naparima Boys College
- Naparima Girls High School
- Princes Town Community College
- San Fernando East Secondary
- San Juan North Secondary
- Siparia West Secondary
- Waterloo High School
- St Anthony's College
- Presentation College Chaguanas

Special thanks was also given to partner organisations through their representatives at the event. This included:

1. Mr Shernon Osepa - Manager Regional Affairs, Latin America and the Caribbean, Internet Society
2. Mr Albert Daniels - Senior Manager, Stakeholder Engagement - Caribbean, ICANN

3. Mr Kevon Swift - Head of Strategic Relations and Integration, LACNIC
4. The Telecommunications Authority of Trinidad & Tobago (TATT)

Recognition was also paid to the many sponsors of the event:

1. SM Jaleel and Co Ltd for providing beverages for the event
2. AV IT - for audio visual support
3. Naparima Boys College - for the venue, photography and assistance with venue preparation
4. The Internet Governance Forum Support Association (IGFSA) - for their continued support and partnership for the 4th year running
5. TTNIC - for their generous and ongoing partnership with the TTMAG and TTIGF

A special mention was also made for Mr Raj Ramdass and his team from RSC International for their efforts to encourage students to be part of the TTIGF2020 and for providing assistance in logistics and the breakout sessions.

Recognition was also paid to the youth leaders, Darren Ramsook, ShivaShiva Ramoudith, Sarah Sobrian, Stacey Grifitth-Alves, Neha Maharaj and Kimberlee Laloo who moderated the work of the breakout groups and provided the summary reports for the IGF audience.

Thanks also went out to the following attendees:

1. Maria O'Brien - Google Developers Group, POS
2. Jaqueline Morris - Soroptimist International
3. Johnny McPhee for streaming the event so that the event would be seen around the world
4. Demeece Manwarring of the TTMAG for the great work and effort as the events coordinator

Personal thanks were also expressed for all those attending the TTIGF 2020 event, the contributions made and the enthusiastic participation with all the sessions, particularly the youth collaborative exchange which saw some active discussions and recommendations coming out of the sessions. Encouragement was also given to organisations to become part of TTMAG and everyone was reminded that the TTMAG was not only about IT and for IT people but was open to all organisations who may have an interest in Internet Governance and the activities of the TTMAG. Those wishing to learn more were invited to visit the TTMAG website at www.mag.tt to learn what the TTMAG was all about.

Finally, attendees were informed of the intention to send out a post event survey and were encouraged to complete it as this would provide important feedback and recommendations that would be used to improve the next TTIGF and future IGF events.

Mr. Hackshaw then brought the 4th TTIGF to a close and wished everyone a safe journey home.

TTIGF 2020 - Interactions *(images to be updated)*

CENTRAL AMERICA

KALIFA SANDIFORD