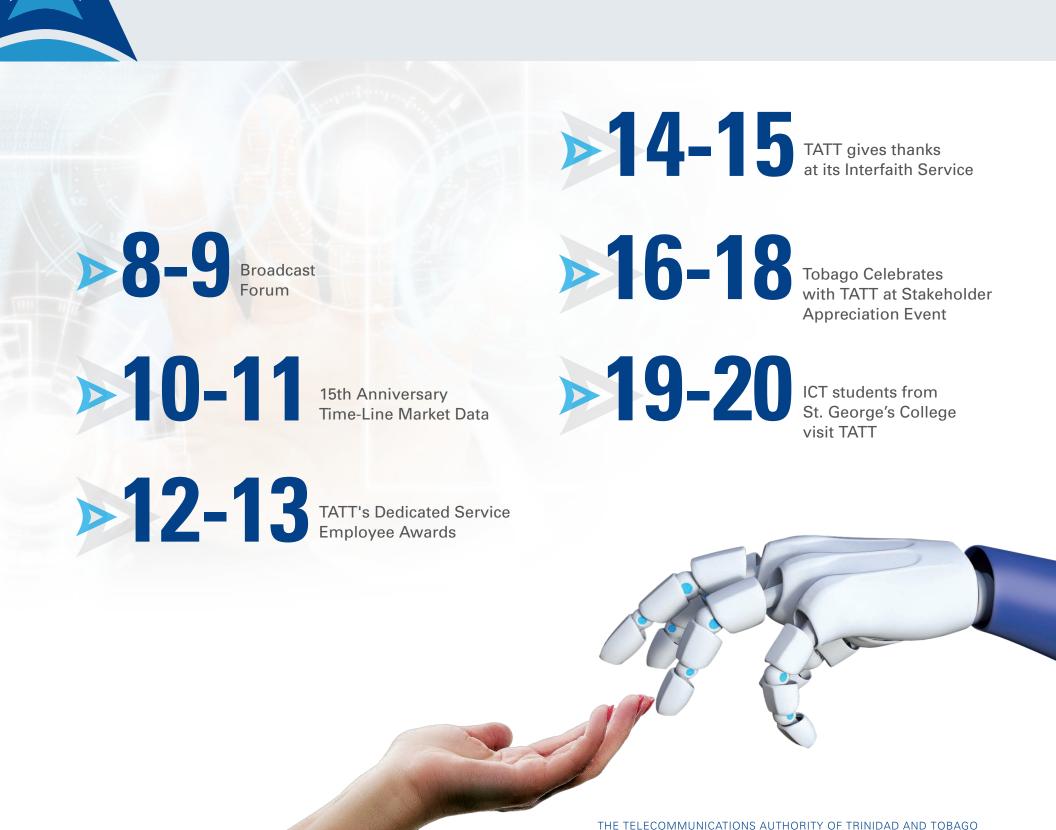


A PUBLICATION OF THE TELECOMMUNICATIONS AUTHORITY OF TRINIDAD AND TOBAGO











In today's increasingly complex, technology-driven business environment, effective design, development and execution of strategy has never been more essential. Strategy drives all business disciplines. However, after today, organisations struggle with managing 'strategy design through to execution'. Worldwide, some 91% of strategic execution/change programmes fail to succeed (Harvard Business Review).

As TATT celebrates 15 years of its existence and enters its 16th year of operation, it is with great enthusiasm that we have now crafted our Fifth Strategic Plan. This three-year Plan will establish a roadmap to guide the Authority in fulfilling its mandate to develop a forward-looking and effective regulatory framework for steering the growth of Trinidad and Tobago's telecommunications and broadcasting sectors.



In 2019, a strategy development team, led by external consultants from Odyssey Consulting., championed the initiative. The core team consisted of executives, managers and a cross-section of staff representing various departments, all of whom contributed to the process, infusing into the Plan the myriad unique and insightful perspectives put forward.

TATT's past and current performance and achievements were reviewed, in the context of the wider socio-economic environment and national development goals, and the status of the sectors since liberalisation. This assessment was done through deep-dive diagnostics in several areas including document analysis, interviews with external stakeholders such as service providers and Ministry representatives; and workshop sessions with the Board and staff. In addition to the numerous core team sessions, all staff were invited to a whole-day Strategic Planning Retreat at Ortinola Estates, where engaging, fun and thought-provoking activities and workshops brought out innovative ideas on what TATT did well as an organisation, what needed to be done better, and what we need to initiate in order to fulfil our mandate and more effectively meet the demands of all stakeholders.

During the Strategic Planning phase, the core team assessed the gaps between TATT's current state and the future state envisioned, and developed strategies that will better enable the organisation to live its mission and achieve its vision. The building blocks of the strategy were then laid down. These included: strategic themes and statements of intent, strategic objectives, a strategy map, measures and targets, initiatives and the implementation timeline.





Subsidising Accessible Devices for Persons with Disabilities TATT launches its first Universal Service Fund Initiative

- "A person is only as disabled as their environment and the beliefs of the people around them."
- Bala M. Pillai, DPT, PCS, specialist in Pediatric Physical Therapy and Developmental Neurology

This powerful quote set the tone for the presentation delivered by Ms. Annie Baldeo, Executive Officer, Economics at TATT, at the launch of the Persons with Disabilities (PwDs) Subsidised Accessible Devices Project, which was held on June 23, 2019, at TATT's Barataria office.

Ms. Baldeo noted that according to the World Health Organization (WHO), over a billion people—approximately 15% of the world's population—are now estimated to be living with some form of disability. Furthermore, the WHO has projected that these disability rates will continue to rise on an annual basis. Ensuring that PwDs have equal access to basic Information and Communications Technologies (ICTs) is a major global challenge, especially in developing countries Trinidad and Tobago.

TATT has, therefore, embarked on the implementation of a Universal Service initiative to provide assistive devices and technologies to PwDs. Ms. Baldeo informed that the main objectives of this project are, to:

- **1.** Ensure that PwDs have access to basic telecommunications mobile services.
- 2. Make ICTs more affordable to PwDs.
- 3. Reduce the digital divide by promoting digital inclusion of PwDs.
- **4.** Enhance the quality of life by enabling those with disabilities to participate more fully in society—at school, work and in civic life.
- **5.** Enable independent living for PwDs.

The launch also included a live demonstration by Ms. Asenath Mc Ewen, Business Operations Assistant, MSD&FS (herself visually-impaired) on how she uses special mobile apps to communicate in her business and social life. One such app demonstrated was the Seeing Al software which uses the device camera to identify people and objects, following which the app audibly describes those objects for people with visual impairment.



The rationale for this project is rooted not only in TATT's legislative mandate but in international treaties and conventions to which Trinidad and Tobago is a signatory.

The United Nations Convention on the Rights of Persons with Disabilities (the Convention), which took effect in May 2008, emphasises the importance of information and communications technologies (ICTs) in enabling PwDS to enjoy basic human rights. Signatories to the Convention are obliged to ensure that PwDs can access ICTs on a basis equal to others. Article 9 (1) of the Convention states:

To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.

In the case of ICT devices, lack of assistive features is a barrier which impedes PwDs from full participation in the digital world. Article 4 (g) of the Convention requires Member States:

A cross-section of those attending (In the front row, from left):

Mrs. Cynthia Reddock-Downes, the Authority's Chief Executive Officer (Ag); Ms. Doreen Bogdan-Martin, Director of the ITU Telecommunication Development Bureau; Ms. Bernadette Lewis, Secretary General, Caribbean Telecommunications Union; Mrs. Pamella Benson, Chairman of the Authority's Consumer Complaints Committee; Dr. Kim Mallalieu, the Authority's Deputy Chairman; Ms. Annie Baldeo, Executive Officer, Policy, Planning and Economics.

To undertake or promote research and development of, and to promote the availability and use of new technologies, including information and communications technologies, mobility aids, devices and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost.

In accordance with section 18 (1) (g) of the Telecommunications Act, Chap 47:31 (the Act), TATT is obliged to comply with this Convention. This section states:

Subject to the provision of this Act, the Authority may exercise such functions and powers as are imposed on it by this Act and in particular-ensure compliance with the Convention.

In addition to its international obligations, TATT's responsibilities for universal service also played a crucial part in the development of this project. In 2015, Telecommunications (Universal Service) Regulations were developed to provide the legal bases for the operation of the





Universal Service Fund (USF) and for the imposition of obligations on concessionaires to implement universal service initiatives identified by TATT.

Two digital divide surveys were conducted to determine which groups of persons were unable to access basic or very poor quality of service. Among the groups of persons identified by TATT through the surveys were PwDs. It was recognised that there was a financial challenge to access assistive technologies. To craft strategies to address this problem, TATT then engaged representatives from organisations such as the National Center for Persons with Disabilities, the Consortium of Disability Organisations (CODO), the Trinidad and Tobago Association for the Hearing Impaired and Persons Associated with Visual Impairment (PAVI),

The results these engagements (Universal (Amendment) Telecommunications Service) Regulations, 2019, and section 3 of these regulations mandates the provision of approved assistive technologies to PwDs.

Current research recommends the following assistive features for persons with impairments:

For the hearing-impaired:

- 1. Messaging options
- 2. Vibrating alert
- 3. Adjustable volume control
- 4. Internet capability for video conferencing
- **5.** Relay services

For the visually-impaired:

- a. Screen readers
- **b.** Adjustable brightness
- c. Adjustable font size
- d. Text to speech

The project will be rolled out in two phases. The first (pilot) phase (August 2019 to October 2019) will see the provision of mobile handsets to 100 PwDs who are visually and/or hearing impaired. The second, or full, implementation phase (from November 2019) will entail the provision of mobile handsets to 100% of the targeted PwDs.

In order to qualify for a subsidised mobile device, each applicant must be:

- Visually or hearing impaired
- In receipt of a disability grant issued by the Ministry of Social Development and Family Services and
- A resident of Trinidad and Tobago.

Event speakers (from left):

Ms. Annie Baldeo, Executive Officer, Policy, Planning and Economics; Ms. Bernadette Lewis, Secretary General, Caribbean Telecommunications Union; Dr. Beverly Beckles, Chief Executive Officer of the National Centre for Persons with Disabilities; Ms. Sonja Johnson, Caribbean Telecommunications Union; Ms. Sharon Rogers and Ms. Asenath Mc Ewan, both representatives of the Ministry of Social Development and Family Services.





To augment the customer service provided by TATT and mobile dealers nationwide when interacting with PwDs, the Ministry of Social Development and Family Services will facilitate free sign-language training through The University of the West Indies for representatives from TATT as well as frontline staff at cellular outlets throughout the country.

It is expected that this project will help to increase the uptake of these mobile devices by aiding in the reduction of costs of mobile devices with assistive features to PwDs.

Also speaking at the launch of the project were the distinguished persons:

- Dr. Kim Mallalieu-Deputy Chairman, TATT
- Ms. Sharon Rogers-Director, Disability Affairs Unit, Ministry of Social Development and Family Services (MSD&FS) on behalf of Mrs. Jacinta Bailey-Sobers-Permanent Secretary, MSD&FS
- Ms. Bernadette Lewis-Secretary General, Caribbean Telecommunications Union (CTU)
- Ms. Doreen Bogden-Martin-Director of ITU's Telecommunication Development Bureau (BDT)
- Dr. Beverly Beckles-Chief Executive Officer, National Centre For Persons with Disabilities

More information on the TATT's Universal Service initiatives can be found on TATT's website at:

https://tatt.org.tt/UniversalService/UniversalServiceFundInitiatives.aspx





Annual Broadcasters' Forum - 2019

If I were a Media Owner

TATT and the Trinidad and Tobago Publishers and Broadcasters Association (TTPBA) hosted the 3rd Annual Broadcasters' Forum on September 18, 2019, at TATT's head office.

Focussed on the theme "If I were a media owner", this year's forum brought together local practitioners in the print, radio and television broadcasting industry to discuss the following contemporary issues affecting the media:

- 1. The Changing Business Model
- 2. Fake News Phenomenon A Caribbean Perspective
- 3. Financial Perspective Selling Media in a Changing Environment



The proceedings began with introductory remarks from Mrs. Cynthia Reddock-Downes, CEO (Ag.) of TATT. Mrs. Reddock-Downes' presentation of financial figures from TATT's Quarterly Market Update for the first quarter of 2019 shed light, on the shrinking broadcasting market, and provided a stimulus for the discussions that ensued in the day's proceedings. In summary, she indicated that the revenues for pay (subscription) TV and free-to-air (FTA) radio and TV, and penetration per 100 households, had all declined for Q1 2019 when compared to Q1 2018.

Mr. Nicholas Sabga, Guardian Media's Managing Director, spoke next, on the challenges faced by traditional media and the need for broadcasters to adapt their business models to cope with rapidly changing paradigms and consumer demands, driven by new technologies. He stressed that if you looked back three years, the shrinkage in the market is bleaker, at a staggering 50%. He showed the significant evolution of both the local and global media landscape, noting especially the shift away from consumers simply "consuming" content to their creating it—and in real-time, putting the consumer in control.



He stressed that the business model required for broadcasters today was no longer "one-size fits all". Instead, each broadcaster needed to assess the market to determine:

- 1. What is best?
- 2. What is profitable?
- 3. Voids in the market/niche opportunities?
- 4. Where to adapt?
- 5. Which partnerships and strategic alliances would be best?

President of the TTPBA, Ms. Kiran Maharaj, then delivered a presentation on the fake news phenomenon, from a Caribbean perspective. She likened fake news to journalism on steroids and highlighted the pressure it placed on real media. Currently, additional time and resources are required to fact-check. This could be addressed with technology by implementing fact-checking sites for the Caribbean, search engine tools for filtering, and anti-fake news advertisements targeting fake news feeds.

She also put forward some creative ideas for combating fake news. One such idea was broadcasters using fake news to their advantage.



For example, a media house could have a discussion on the fake news story of the day. This would get the public engaged and create further awareness of the problem. Another idea was to find multiple credible sources to debunk fake news. A third idea was to create a fake news hotline where the public could report fake news.

The final speaker, Ms. Christianne Elcock, General Manager, Family Focus Broadcasting Network, began her presentation with an overview of the challenges in the advertising market. Ms Elcock then discussed mechanisms to respond effectively to these challenges, including via: flexibility with advertising rates; unique selling positions; social media offered as part of the selling package; and convergence of traditional and new media.

Throughout the proceedings, the challenges to traditional media were emphasised. Importantly, however, there was an encouraging sense that the broadcasters are strategically aware of and ready to meet the present and future requirements for creating a more effective, relevant and robust broadcasting sector for the modern 21st century Trinidad and Tobago.



Over the past 15 years, TATT has produced and published the Annual Market Report (AMR)—a comprehensive compilation of statistics on the telecommunications and broadcasting sectors of Trinidad and Tobago. The AMR highlights key statistics and information on prevailing market trends. The first edition was published in 2006.

Looking back, since liberalisation in 2004 the local industry has been transformed substantially in the face of—or rather in alignment with—rapid and often disruptive global technological developments, from market liberalisation to technological development. Overall, the performance of the sectors has been stable, generating positive growth despite a protracted period of economic slowdown in the domestic economy in more recent years.

Let us take a look at some of the key market milestones over the past 15 years.

2006 | The Mobile Market is Liberalised

A new operator entered the market in May 2006. For the first time, citizens of Trinidad and Tobago benefitted from an increase in competition in this arena, enjoying more consumer choice. Within a few months of liberalisation, the mobile voice market increased by 79% when compared to 2005, recording 1.6 million subscriptions at the end of 2006.

2007 | Fixed Voice Subscriptions Start to Fall

The fixed voice market declined for the first time since 2000, decreasing by 6% in 2007. To date, a declining trend is still being observed.

2008 | Digital Pay TV Poised to Overtake Analogue

The pay-TV market surged forward in 2008 as digital subscriptions almost equalled analogue. Digital pay-TV subscriptions increased by 12%.

2009 | Internet Growth Spurt

Internet subscriptions (fixed and mobile) increased by 84% from 2008. This is the highest growth rate ever recorded for this market.

2010 | A Great Year for Free-to-Air Broadcasting

In 2010, free-to-air (FTA) television broadcasting revenues increased by 25%, generating TT\$132 million, and FTA radio broadcasting revenues increased by 9%, generating TT\$167 million.

2011 | Fixed Internet: Closing the Digital Divide

The number of households in Trinidad and Tobago that had a fixed Internet connection reached 50% in 2011.

2012 | Launch of 4G Mobile Internet

The introduction of HSPA+ paved the way for the provision of improved services at enhanced mobile broadband Internet access speeds—a significant step up from the 2.5G technology.

2013 | Significant Uptake of Mobile **Broadband Internet Services**

Consumers embraced the introduction of mobile Internet services. Just one year after its introduction, mobile broadband users moved from 96,000 to 236,000.

2014 | Sustainable Growth in the Telecommunications and **Broadcasting Sectors**

For the past decade, revenues generated in these sectors have increased steadily, representing approximately 3% as a percentage of Trinidad and Tobago's gross domestic product (GDP) each year.



2015 | Mobile Voice Market Milestone

This market increased by 7% in 2015, recording two (2) million subscriptions.

2016 | Growing Demand for Mobile **Broadband Internet Services**

Subscriptions to mobile Internet services continued to increase, 9% with over 700,000 subscriptions.

2017 | Internet Services become the Top Revenue Earner

With an estimated TT\$1.56 billion in revenues earned, the Internet market surpassed the mobile market (TT\$1.55 billion) to become the top revenue earner in the industry.

2018 | Fixed Internet Subscriptions Continue to Increase

The number of subscriptions in the fixed Internet market continued to grow in 2018, approximating 341,300 subscriptions—a 4.4% increase when compared to the same period in 2017.



The Ten Year Awardees (from left to right): Ms. Aisha Weston, Accounting Technician; Ms. Karina Persaud, Legal Advisor; Mrs. Tambi Serrano-Rock, Accounting Technician; Mr. Jerome Lynch, Compliance Officer.



Receiving awards for 15 years of dedicated service (left to right): Mr. Ryan Mohammed, Manager Procurement; Mrs. Lindy-Ann Neckles, Assistant Accountant; Mrs. Gweneth Arnold, Hospitality Attendant; Mr. Selwyn Campbell, Driver/Courier; Mrs. Cynthia Reddock-Downes, Chief Executive Officer (Ag.); Mr. Kirk Sookram, Executive Officer-Technology and Engineering; Mr. Rudra Bidaisee, Licensing Officer II.

TATT gives thanks at its Interfaith Service



Anniversary celebrations by recognising The Almighty at an Interfaith Thanksgiving Ceremony for staff and stakeholders on 1st July 2019, all proud of such a significant milestone for the organisation as well as the industry.

Since its establishment on July 1, 2004, TATT has made an outstanding contribution to the development of T&T's Information and Communications Technology (ICT), telecommunications and broadcasting sectors, which are all critical to: innovation and the diversification effort, the advancement of the digital economy, and the attainment of the 17 Sustainable Development goals.

In its approach, TATT has sought to ensure that the needs of all stakeholders are met. As a leading regulator in the Region, TATT has become an exemplar for other regulatory bodies.

Mr. Gilbert Peterson, S.C., Chairman of the Board of Directors, in his welcome remarks, spoke of TATT's championing role in the



development of the industry over the past 15 years. Recognition was made of our steadfast growth as we continue to expand our horizons and adapt to the fast-changing global arena. In highlighting "TATT's focus [on] building a new, modern, socio-economic infrastructure that can support radical diversification in the emerging digital era", he stressed that, "as a people, we have to ensure that we understand the benefits of technology as we seek to thrive and compete in an increasingly post-oil and gas world".

The Honourable Maxie Cuffie, Parliamentary Secretary in the Ministry of Public Administration, delivered the feature address at the event, spotlighting the many contributions TATT has made towards the establishment of this nation's robust ICT backbone. Congratulating TATT on the role it has played in revolutionising communications for the new world order, he mentioned in particular TATT's core input in helping the Government of the Republic of Trinidad and Tobago (GORTT) to lay down the country's five-year National Information Communication Technology (NICT) Plan for 2018 to 2022 — the ICT Blueprint.

The NICT plan is built on five strategic thrusts:

- 1) Improving Connectivity
- 2) Increasing Human Capacity
- 3) Digital Government
- 4) Fostering Economic Development
- 5) Advancing the Environment for Societal Benefit.

The event started with two stirring renditions sung by the Bishop Anstey High School Choir. This was followed by readings of scriptures from the country's major faiths, and moments of meditation, with reflections by members of staff. Throughout the proceedings, the appreciative audience was treated to a melodious duo interlude by dedicated TATT employee Mr. Robert Garcia, along with his sister Ms. Patricia Garcia. They were followed by the Malik Folk Performers, who teamed with the Shiv Shakti Dance Company, sweeping in with a vibrant and refreshing inter-cultural dance showpiece. In the final act, the multi-talented Fusion Steel Band led by Darren Shepherd, matched the other entertainers with an impressive instrumental stand-and-deliver performance.

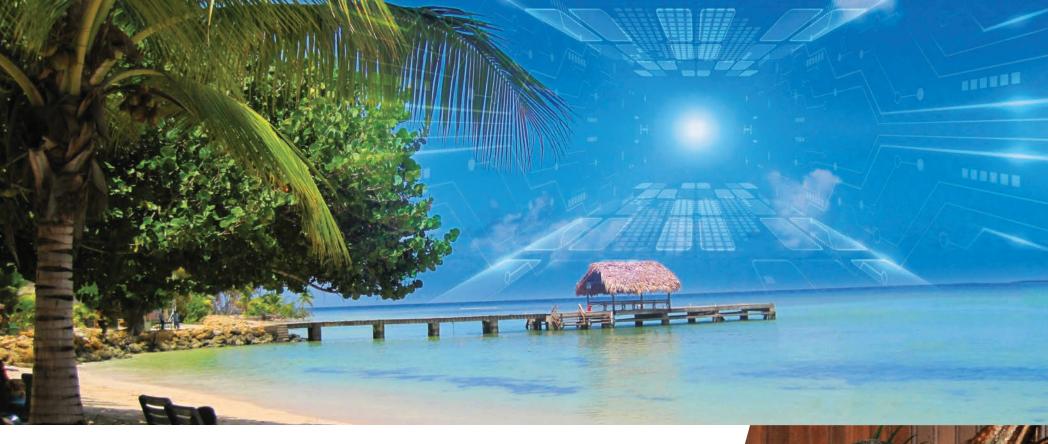
Inspirational speaker Ms. Akosua Dardain Edwards focussed her presentation on Employee Enhancement, Empowerment, Exchange of ideas and personal Experiences, reminding staff that while change is inevitable, we must heed the response (from citizens) for a more fortified digital nation.

Bringing the event to a close, Mrs. Cynthia Reddock-Downes, Chief Executive Officer (Ag.) of TATT, praised members of staff and stakeholders for their invaluable contribution over the years, as that had ensured the success of the Authority's 15-year journey. Tribute was paid especially to those earliest members of staff who laid the foundation for the organisation in 2004, as well as those who are currently building on their successes as we develop this important national institution.

A cross-section of staff and guests at the Interfaith Service.



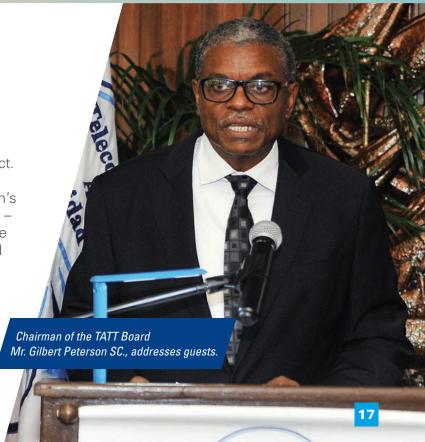


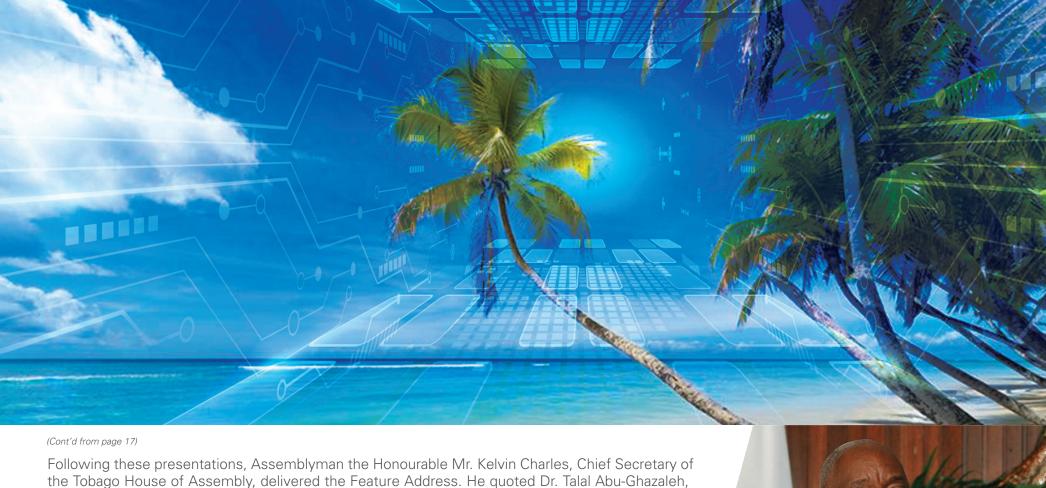


The following speakers from TATT delivered presentations:

- **1. Mrs. Cynthia Reddock-Downes**, Chief Executive Officer (Ag.), spoke on TATT's achievements in Trinidad and Tobago since establishment.
- 2. **Mr. Kirk Sookram**, Executive Officer Technology and Engineering presented on the National "Free" Wi-Fi Initiative.
- **3. Ms. Annie Baldeo**, Executive Officer Policy Planning and Economics, shared details on TATT's Persons With Disabilities Subsidised Accessible Devices Project.

The initiatives presented are in keeping with the Ministry of Public Administration's National Information and Communication Technology (NICT) Plan for the period 2018 – 2022, which consists of five strategic thrusts geared towards the attainment of the Sustainable Developments Goals (SDGs). The Persons with Disabilities Subsidised Accessible Devices Project aims to provide the visually impaired and hearing impaired with mobile devices with assistive features, making them available at a subsidised cost to persons registered with the Ministry of Social Development and Family Services. The National Wi-Fi Initiative will allow citizens to benefit from free public Wi-Fi zones at national libraries, hospital waiting-areas and major transportation hubs, and is scheduled to be on-stream during the 2019 – 2020 financial period. This project was started in 2018 with the outfitting of public transportation buses with free Wi-Fi service throughout Trinidad and Tobago.



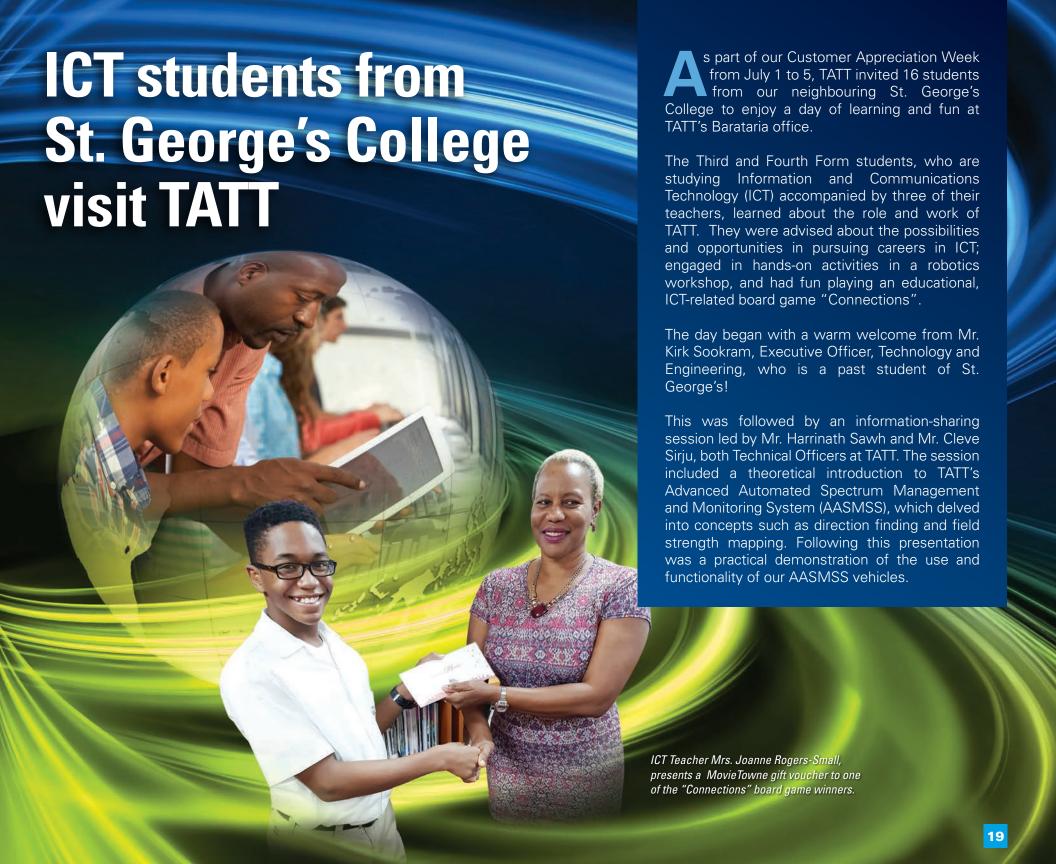


Following these presentations, Assemblyman the Honourable Mr. Kelvin Charles, Chief Secretary of the Tobago House of Assembly, delivered the Feature Address. He quoted Dr. Talal Abu-Ghazaleh, Chairman of TAG Global: "An efficient telecommunications network is a foundation upon which an information society is built". He congratulated TATT for the contributions made to ensuring that Tobago is kept abreast as an information society in this digital age. He highlighted that, over the years, both the telecommunications and broadcasting sectors in Tobago have undergone fundamental changes, one of which was the liberalisation of the market from a monopolistic to a competitive one.

In Tobago, there is now more than one option for mobile, landline, Internet, subscription television and free-to-air services compared to in 2004, when there was only one provider in most cases. He added that the increased use of ICTs in day-to-day operations, coupled with sustained widespread access and effective regulation, has undoubtedly improved human interaction and business development, all leading to an enriched quality of life on the island.

In closing, Ms. Sherry McMillan, Executive Officer, Corporate Communications, thanked all participants for their treasured contributions to the industry over the past 15 years, and urged all present to continue to work together for an even better Trinidad and Tobago.

Assemblyman Mr. Kelvin Charles, Tobago House of Assembly Chief Secretary and Secretary of Education, Innovation and Energy, speaks at the event.



The "Little Bits" workshop, conducted by representatives of NIHERST, introduced the students to the "little bits" electronics kit, and demonstrated the ease of creating electronic circuits through easily assembled components. The students built fully functional and innovative electronic devices, while learning about electronics and its applications.

Working in teams of three or four persons, the students were challenged to build motorised robots, and then control them wirelessly. Special prizes of Kindles were awarded to the team with the most creative robot.

The day ended with the students playing an interactive ICT-based board game called "Connections", which was facilitated by Mr. Antonio Fletcher, Economist at TATT.

Four groups of four each took turns playing this engaging game. Each of the four winners was rewarded with MovieTowne gift vouchers.

Mrs. Joanne Rogers-Small, who teaches ICT at St. George's, speaking on behalf of the visiting group said that both teachers and students had thoroughly enjoyed the day, and were looking forward to participating in similar activities with TATT in the future.



NIHERST tutors engages the students.







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