



# Global Information Society Watch

## 2018



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*This edition of GISWatch came into being alongside a brand new baby boy. Welcome to the world, Ronan Diga!*

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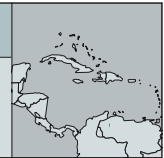
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# THE CARIBBEAN

## ISOC'S TASK FORCE FOR LATIN AMERICAN AND CARIBBEAN COMMUNITY CONNECTIVITY (TFLAC<sub>3</sub>) AND CARIBBEAN COMMUNITY NETWORKS



**Internet Society Chapters in St. Vincent and the Grenadines, Guyana, Dominica, Trinidad and Tobago, Puerto Rico, Barbados and Panama and ISOC Blockchain Special Interest Group**  
Renata Aquino Ribeiro  
<https://netcollective.wordpress.com>

### Introduction

This report offers an overview of community networks in the Caribbean and of the northern region of South America. It is based on the work of the Task Force for Latin American and Caribbean Community Connectivity (TFLAC<sub>3</sub>),<sup>1</sup> a forum for discussion about community network projects in the Caribbean Communications Treaty (CARICOM) region. It holds webinars and meets at internet governance events, including national and regional Internet Governance Forum (IGF) initiatives (NRIs).

The countries that are part of the forum are represented through their Internet Society (ISOC) chapter members: Barbados, Trinidad and Tobago, Dominica, Guyana, St. Vincent and the Grenadines, Panama, Puerto Rico, and Brazil's Amazonian and Northeastern Region, via an ISOC Blockchain Special Interest Group (BSIG) member.<sup>2</sup>

The community networks discussed in this forum are various and in different stages of implementation. Some are urban and connected to community centres, others are rural and connected to universities and NGOs. Many are still in the planning stages. In the Small Island Developing States (SIDS) countries, these networks were described as having gone through rebuilding since most of the countries were affected by hurricanes and other natural catastrophes. Together, all the members of the chapters in the countries that are part of this forum represent an average of 200 members.

The clarity in approach and thinking and the experimentation necessary to build community networks in complex scenarios can be learned from the TFLAC<sub>3</sub> participants. The forum also highlights the importance of having allies to support community networks, as well as forums for discussions such as the NRIs,<sup>3</sup> LACNIC<sup>4</sup> and LACNOG,<sup>5</sup> and the Dynamic Coalition on Community Connectivity (DC<sub>3</sub>),<sup>6</sup> the dynamic coalition at the global IGF which deals with community networks.

### Setting up TFLAC<sub>3</sub>

TFLAC<sub>3</sub> was created at the ISOC chapters workshop at the 2017 Latin America and the Caribbean Regional Preparatory Meeting for the Internet Governance Forum (LACIGF). This was a one-day pre-event meeting where participants of several chapters could choose topics for debate, form groups, and build a collaborative project on a theme. The Caribbean representatives came together as a group because of the diverse languages they shared – with Spanish, English and French, among other languages, all spoken in the region. People from the Amazonian region, which comprises nine countries, with its multitude of languages and dialects, also became part of this group, while two Central American countries, Panama and Puerto Rico, also identified similar challenges to ours and joined the group.

From the beginning, the group showed different approaches to community networks, different stages of implementation, and dealt with gender challenges in different ways.

The participants in the task force are listed in Table 1. It is important to note that these participants

1 TFLAC<sub>3</sub> was created at the 2017 Latin America and the Caribbean Regional Preparatory Meeting for the Internet Governance Forum (LACIGF) and was expected to continue until June 2018. However, since then, TFLAC<sub>3</sub> initiatives have continued, and TFLAC<sub>3</sub> has become a permanent forum, albeit less active. It can be thought of as a project that transformed into a forum.

2 The Internet Society Blockchain Special interest Group (ISOC-BSIG) is a group that unites global members of ISOC interested in blockchain technologies. Some of these members carry out projects in their regions. Two ISOC-BSIG members (one from Brazil and another from Guyana) founded TFLAC<sub>3</sub>.

3 National and Regional Internet Governance Forum Initiatives (NRIs) are national and regional Internet Governance Forums (IGFs) such as the Brazil IGF or the Caribbean IGF. They are all part of the network of the global IGF, promoted by the United Nations (UN).

4 The Latin America and Caribbean Network Information Centre (LACNIC) is the organisation responsible for internet address registries in the region.

5 The Latin America and Caribbean Network Operators Groups (LACNOG) is a community of network operators, organisations and professionals responsible for internet connectivity in the region.

6 The Dynamic Coalition on Community Connectivity (DC<sub>3</sub>) of the IGF is one of the intersessional bodies of the event which gathers annually. There is a group of members discussing community connectivity in a discussion list, and during the global IGF, a session on the topic is held and an outcome document is published.

TABLE 1.

TFLAC <sub>3</sub> members		
Name	Chapter	Role in the forum
Rodney Taylor	Barbados Chapter	Research
Talya Mohammed	Trinidad and Tobago Chapter	Secretary
Craig Nesty	Dominica Chapter	Timekeeper
Malisa Richards	Guyana Chapter / Blockchain SIG member	Research
Willis Williams	St. Vincent and the Grenadines Chapter	Research
Renata Aquino Ribeiro	Blockchain SIG member	Leader
José R. de la Cruz	Puerto Rico Chapter / Cybersecurity SIG member	Second leader
Russell Bean	Panama Chapter	Researcher

were representatives of their national chapters and not necessarily the leaders of those chapters. They would still involve their local colleagues in conducting research or implementing community networks, among other activities. Some had already studied community networks (Brazil and Guyana),<sup>7</sup> but others were still to begin looking for useful case studies that were relevant to the challenges they faced at the local level.

### Starting to identify community network challenges in the Caribbean

The forum has held periodic webinars where participants have been able to share their findings and exchange ideas about the particular theme under discussion. Thematic aspects like the interaction of community networks with local operators, possible governmental support, and dealing with communities with different languages and cultural profiles were some of the most important topics. However, the dates of the LACIGF and Caribbean IGF to be held in 2018 were rapidly coming up, and both of these were to be important opportunities for the forum to meet and lobby for support for their activities, convincing possible partners to fund activities or provide hardware which could be helpful. Because of this, the project held periodic online meetings, presentations and debates on community networks ahead of these forums.

In our first preparatory meeting ahead of the Caribbean IGF, general observations about the local chapters were made, and some challenges identified:

**Barbados** – The definition of “community” itself impacted on how the participant planned research and identified community networks. Barbados

has community centres and telecentres that are used for internet access. The community decided on the uses of these centres, and the educational programmes run there. However, their infrastructure was not autonomous and was dependent on government resources. Different communities in Barbados had different goals (regional commercial development, increasing quality of education, etc.), and determining who that community was and what their goals were created the profile of the network, according to researcher Rodney Taylor of ISOC Barbados. Barbados was one of the Caribbean nations heavily affected by floods and hurricanes in 2017. Much of the groundwork for community networks was destroyed or disrupted. There was a long hiatus before the networks could be rebuilt.

**Trinidad and Tobago** – The Trinidad and Tobago IGF has suggested new participants in TFLAC<sub>3</sub> for the 2018 IGF. According to ISOC Trinidad and Tobago member Talya Mohammed, there are many community network initiatives being discussed in parallel in the region. For example, there is the proposal to form an IEEE SIG on Humanitarian Technology,<sup>8</sup> as well as an ISOC SIG on community networks.<sup>9</sup> Talya is one of the women involved in the ISOC SIG.

**Dominica** – This ISOC Chapter was founded in 2017 and Craig Nesty was the member who joined the community networks project as a researcher. Although the chapter has fewer than 100 members, the participation of women is proportionally slightly better off than in the Latin American chapters. In fact, most of the Caribbean chapters have a higher participation of women compared to the Latin American chapters, with some being board members.

7 Brazil and Guyana had studied community networks as part of governmental projects previously implemented in the region which distributed low-cost laptops to students and experimented with wireless networks.

8 The Institute of Electrical and Electronics Engineers (IEEE) is an organisation of professionals and enthusiasts on engineering topics. Its members form special interest groups, including the IEEE Special Interest Group on Humanitarian Technology (SIGHT). See: <https://www.ieee.org>

9 ISOC is a non-profit organisation which has groups themed under specific topics in Special Interest Groups. At the IGF 2017, the Community Networks SIG was announced as approved. See: [cnsig.info](http://cnsig.info)

Some chapters have about 60% participation by women. Despite Craig having been involved in the project, one of the members who was going to take on and continue the research he had started was a woman, a university student. Unfortunately, Dominica was also hit heavily by hurricanes in 2017 and this member had to drop out from her volunteer work on the project to rebuild her home.

*Guyana* – This was the chapter most active throughout the initial duration of the project (from July 2017 to June 2018, but the project continues as a permanent forum, albeit less active and more informal) and helped spin the TFLAC<sub>3</sub> into other projects such as a Chapterthon<sup>10</sup> contribution and putting the theme on the map in the first Guyana IGF. Malisa Richards, the Guyana ISOC member who participated in the forum, is an educator who became involved in the One Laptop per Child (OLPC) programme in her school.<sup>11</sup> She became a true believer in the importance of connectivity for regional development. Malisa was among the founders of the ISOC Guyana Chapter<sup>12</sup> and the Guyana IGF, and is also a member of the ISOC Blockchain SIG.

*St. Vincent and the Grenadines* – This chapter, formed in 2017, is also among those that have a close to equal gender distribution among their members. Willis Williams joined the TFLAC<sub>3</sub> project in 2017, but the project was also helped greatly by Roxanne John, who is a researcher collaborating with the St. Vincent and the Grenadines ISOC Chapter, and also participated in the first IGF in the country in 2018 where the theme of community networks became an integral part of the debates. Although it is a Caribbean SIDS, St. Vincent and the Grenadines was not among the islands most hit by hurricanes and other natural disasters in 2017. This helped greatly in advancing the plans of building access infrastructure, including community networks.

*Puerto Rico* – ISOC chapter member José de la Cruz joined the TFLAC<sub>3</sub> forum during the LACIGF 2017. Soon after, Puerto Rico was devastated by natural disasters which impacted specifically on technology and infrastructure. The ICANN61 meeting<sup>13</sup> was a few months away from happening in San

Juan, the commonwealth's capital. Fortunately, despite the federal government not being helpful, the technology community gathered in several volunteer efforts to help rebuild the island. The planned meeting happened and there were several occasions when ISOC Puerto Rico could make its work known. At a civil society organisations roundtable the president of ISOC Puerto Rico, Eduardo Díaz, spoke about their efforts in working on several access initiatives, including community networks.

*Panama* – The LACIGF 2017 happened in Panama City, and is where TFLAC<sub>3</sub> was born. Despite not being an island, Panama, like many other Central America countries, faces challenges similar to the SIDS and has treaties with the nearby islands. One member of ISOC Panama was particularly engaged in this project: Russell Bean. As a professional in a telecommunications company, Russell was also a representative of the technical community. He gave us hints and insights into implementing community networks. Panama also hosted LACNIC29,<sup>14</sup> where ISOC St. Vincent and the Grenadines was present, and ICANN62,<sup>15</sup> where many ISOC members in these countries met again.

The many indigenous communities and their different dialects in the Caribbean – as well as in the Amazon region – add to a composition of a varied landscape where community networks need to be mobile and can always be rebuilt whether due to migration or other reasons such as natural disasters. The relationship between mobility and migration is a dynamic typical of the Caribbean. Tribes may move to the inside of the forests if lands are devastated and may merge with other tribes. So adaptability and working with Wi-Fi routers and mobiles are key.

Sometimes the originators of these networks were specific people, a technology professor, a digital rights lawyer and even a public school teacher. The infrastructure might be funded from someone's own pocket, or through a collaborative effort at a specific instant in time. In the Amazon region, the common use of transportation by boat to forest areas made routing Wi-Fi via mobiles on the river the easiest and quickest form of communication.

Communication apps like WhatsApp were used to offer educational courses, like maths or science. The largest cities could host test periods at the end of a semester or teacher conferences, but the actual teaching, the communication between the communities, was all done via smartphones.

10 The Chapterthon project “Be a hero of your own community” introduced debates at schools on how community networks and other independent and decentralised technologies, such as blockchain, can help shape the society's future. The Chapterthon produced an online video in Portuguese: <https://youtu.be/FuO5thVeloQ>

11 The OLPC programme ran in Guyana until 2016. However, many schools are still using the laptops.

12 Malisa Richards published a blog post on the founding of ISOC Guyana: [www.circleid.com/posts/20171029\\_internet\\_society\\_guyana\\_chapter\\_officially\\_launched](http://www.circleid.com/posts/20171029_internet_society_guyana_chapter_officially_launched)

13 <https://meetings.icann.org/en/sanjuan61>

14 [www.lacnic.net/2386/44/evento/welcome-to-lacnic29](http://www.lacnic.net/2386/44/evento/welcome-to-lacnic29)

15 <https://meetings.icann.org/en/panamacity62>

Another innovative characteristic was the participation of the Blockchain SIG, which explores the impact of blockchain technologies<sup>16</sup> on society. The idea of identity,<sup>17</sup> currency and even whole governmental systems being reinvented is what brought the BSIG close to the community networks theme. Blockchain can be an ally technology, especially in underserved and less populated regions, which is the case of the Caribbean and the Amazon region.

## Conclusions

The idea of community networks in the Caribbean region is still new, but the practice of sharing and enabling access for specific groups and excluded communities has long existed. What each ISOC country chapter has found is that the reasons for them implementing a community network have been similar: the need for access to knowledge/education, local communication, e-commerce, and access to health and governmental services.

Reinvention and readaptation are key in areas where major natural forces (whether hurricanes, tsunamis or climate change in deep rainforests) impact the local economy and governmental infrastructure. The impromptu build-up of community networks in a boat on the Amazon River or in a family house in the Caribbean is a “pop-up” connectivity choice, one which can be changed or abandoned if a new implementation is needed or cheaper infrastructure is found.

A lack of telecommunications infrastructure is common in many countries in the region, especially in underserved and indigenous areas. However, there is a collaborative sense of engagement with telecommunications operators. For example, Digicel, one of the largest operators in the Caribbean, joined us in a panel on community networks in the Caribbean IGF. This makes community networks not necessarily opposite to the goals of the local telecommunications service providers. In fact, community networks sometimes break ground in underserved regions and after some time the telecommunications services arrive, usually one operator at a time.

With regards to the TFLAC3 project, the group always resorts to the project webinars organised by ISOC Latin America and Caribbean (ISOC LAC)<sup>18</sup> and

the previously recorded discussions from our online meetings.<sup>19</sup> These are key resources that help continue the conversation, even if informally, and help the Caribbean professionals in community networks communicate.

## Action steps

We see a few scenarios for community networks in the Caribbean in the future:

- *Greater collaboration between stakeholders* – While telco operators are usually absent from the region where the networks exist, the community networks “break ground” and create a new consumer market. In the end, partnerships with telcos are possible when an operator catches up with the new demands for services. Perhaps it would be useful to have a dialogue among all stakeholders to map out areas where networks should exist and for strategic sharing of resources.
- *Learning from the other side of the world* – SIDS have commonalities which change the framework of the continent they are in or even the economic distribution of income, being the touristic spots graced with much more infrastructure than inland areas. During our project in 2017 and 2018 we learned greatly from exchanges with the Asia Pacific Network Information Centre (APNIC),<sup>20</sup> an organisation that conducted webinars on rebuilding networks after natural disasters. Asia Pacific islands are also hit by hurricanes and other natural phenomena. The rainforest in Southeast Asia has different characteristics but similar challenges to the Amazon region. Different geopolitical arrangements and communications are needed for the future. Civil society should engage in a multistakeholder dialogue to demonstrate that underserved regions like the Caribbean need quality access infrastructure, not only where the major tourist hotels are, but for all the people in the region.
- *More engagement*: We urgently need more actors engaged in the area of community networks in the Caribbean and solutions which are more long-term, although adaptable. This presents itself as a challenge because the populations we deal with are small in number and in largely rural or forest areas. By building community networks, we are at the same time building communities and pathways for the future of the region.

<sup>16</sup> Blockchain is a decentralised technology platform which can serve for digital currency, digital certificates and even an alternative to the domain name system (DNS), called the Ethereum Name System, an innovation by one of many blockchain companies.

<sup>17</sup> Blockchain can be used for digital certificates and the possibility of an online notary. Some projects have already started experimenting with a blockchain ID for refugees, which can be recognised across borders.

<sup>18</sup> See, for example: <https://nancyquiros.wixsite.com/misitio-2/inicio/community-networks-the-situation-in-the-caribbean>

<sup>19</sup> <https://docs.google.com/document/d/1TLnrDpmvzumzS2YLR8x03QCul1v27MaOsssl7sgQ9og/edit?usp=sharing>

<sup>20</sup> APNIC is the organisation responsible for local domain name registries and fosters education and technology programmes in the region. <https://www.apnic.net>



## Community Networks

THE 43 COUNTRY REPORTS included in this year's Global Information Society Watch (GISWatch) capture the different experiences and approaches in setting up community networks across the globe. They show that key ideas, such as participatory governance systems, community ownership and skills transfer, as well as the "do-it-yourself" spirit that drives community networks in many different contexts, are characteristics that lend them a shared purpose and approach.

The country reports are framed by eight thematic reports that deal with critical issues such as the regulatory framework necessary to support community networks, sustainability, local content, feminist infrastructure and community networks, and the importance of being aware of "community stories" and the power structures embedded in those stories.

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2018 Report

[www.GISWatch.org](http://www.GISWatch.org)



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