



November 2021

Telecommunications Authority of Trinidad and Tobago
#5 Eighth Avenue Extension, off Twelfth Street,
Barataria, Republic of Trinidad and Tobago.
Mailed to: consultation@tatt.org.tt

Ref.: Consultative document on the Spectrum Management Framework (First Round).

Dear Sirs,

We are grateful to the Telecommunications Authority of Trinidad and Tobago (TATT) for the opportunity to present our comments on the current state of public policies for mobile services in Trinidad and Tobago. The comments expressed by 5G Americas¹ are based upon the following publications²:

- "Analysis Of ITU Spectrum Recommendations in Latin America". August 2021.
- "Status of Radio Spectrum Bands in Latin America: 2300 MHz, 2500 MHz & 3500 MHz". May 2021.
- "Importancia de la planificación de espectro 5G". August 2021.
- "5G Spectrum Vision". February 2019.
- "Global 5G: Rise of a Transformational Technology". September 2020.

¹ 5G Americas is a telecommunications industry association that advocates for the promotion and development of a favorable ecosystem for mobile broadband technologies in the Americas. To achieve this, we are committed to working with government agencies, regulatory bodies, international telecommunications standard development organizations, and other global wireless technology stakeholders throughout the Americas to promote and share knowledge for the successful implementation of mobile broadband technologies, including the allocation of spectrum for mobile services and the development of coherent, fair, and effective regulatory policies.

² Available on <https://brechacero.com/white-papers/> and <https://www.5gamericas.org/white-papers/>



Spectrum Management Framework Policy Statement 1. Spectrum will be allocated to the highest value use to ensure that maximum benefits to society are realized.

Mobile technologies continue to solidify as the main alternative for Internet access in Latin America and the Caribbean. The increased adoption of smartphones and mobile broadband requires access to additional spectrum for mobile networks. The effective utilization of the spectrum allocated to mobile services can provide social benefits by reducing the digital divide and allowing users to adopt a wider variety of mobile use cases over LTE and 5G networks. 5G Americas suggest considering accompanying the vision of this statement with a spectrum roadmap with long-term spectrum planning for IMT bands. Implementing spectrum roadmaps provides information and certainty to its potential users. This roadmap must observe the international harmonization of spectrum bands, including tentative dates for new spectrum assignments and information on the current occupation of frequency bands to anticipate processes needed to reorganize spectrum and prevent harmful interferences.

Spectrum Management Framework Policy Statement 2. Mechanisms will be put in place to enable and encourage spectrum to move to its highest value use; and Spectrum Management Framework Policy Statements 41. Where the spectrum is scarce (i.e., demand is greater than supply), the Authority shall utilise competitive licensing mechanisms, such as auctions and/or beauty contests, as the main tools for awarding licenses.

Market-based mechanisms can ensure that spectrum is awarded to entities that plan to deploy wireless networks and efficiently use the resource. Spectrum auctions are widely adopted as a licensing mechanism. The international experience suggests that the design of auctions, tenders, and competitive processes, in general, can impact spectrum access, depending on the valuation of the spectrum blocks and the obligations attached to the licenses. Regulators must consider the dynamics of their domestic market while planning mechanisms of spectrum licensing and renewals.

Furthermore, the line between auctions and comparative review processes ("beauty contests") has become blurred by "hybrid processes" that combine auctions and specific obligations (e.g., coverage requirements/goals, minimum speeds, particular technologies). 5G Americas respects the regulators' views on licensing mechanisms and suggests considering transparent, fair, open, and balanced processes to promote participation and



further network investments. However, this must be done in a framework of technologically neutral spectrum licenses.

5G Americas suggests considering further criteria to complement Policy Statements 2 and 41: continuous consultation with the industry to ensure that spectrum is made timely, with reasonable conditions, and free of harmful interferences. An open dialogue with the industry must be maintained to ensure that enough capacity is available with band plans that preclude artificial scarcity. 5G Americas suggests considering the differences between rural and urban areas to establish incentives for network deployments in underserved and remote areas (e.g., coverage *in lieu* of spectrum payments).

Spectrum Management Framework Policy Statement 4. To the extent possible, the Authority will promote both certainty and flexibility.

Licensed spectrum for exclusive use remains a pillar of 4G and 5G networks for the foreseen future, making the figure of Primary Access Licenses of Trinidad and Tobago a pivotal element to promote certainty. In addition, the possibility of trade licenses in a secondary market helps promote flexibility to current and new users, subject to a framework that allows free negotiations of feasible agreements.

The standardization of 5G considers unlicensed spectrum and shared spectrum as flexible elements of new mobile networks. Sharing may be acceptable under certain circumstances and may be aligned with public policies aiming to reduce the digital divide. Still, clear regulations must be established to protect primary users and reduce interference risks. For example, spectrum sharing by co-frequency coordination of users with similar access rights can facilitate access to underutilized spectrum or allow access to bands that are subject to a prolonged clearing process. In that sense, spectrum sharing can enable mobile service deployment in bands currently occupied by incumbents with limited operations with low interference risks. Still, these scenarios should be carefully managed to ensure sufficient protection against harmful interferences. In the case of spectrum sharing via secondary rights, the regulations must provide enough certainty to primary users.

Spectrum Management Framework Policy Statement 5. The risk and cost of interference will be balanced against the benefits gained from greater spectrum utilization.

5G Americas suggests considering interference mitigation strategies as part of spectrum planning. Depending on the type of services, users, and frequency bands, reorganization



processes can be prolonged and take years to complete, resulting in delayed access to the spectrum. Moreover, there are no unique solutions to potential interference problems. 5G networks will require more spectrum across different spectrum bands, and some use cases require higher levels of network availability and lower latencies, making interference mitigation more critical. 5G Americas suggests considering open and continuous dialogue with the telecommunications industry to address spectrum reorganization needs with reasonable terms.

Innovation in wireless services implies a greater demand for frequencies, including those designated for unlicensed use. In addition, unlicensed spectrum is generally subject to shared use, and some unlicensed bands are contiguous to bands selected for licensed and exclusive use. Given those conditions, 5G Americas suggest considering a continuous review of terms and conditions of use of unlicensed bands to establish adequate technical regulations for spectrum sharing (e.g., power limits, radiation patterns, channel width).

Spectrum Management Framework Policy Statement 6. Spectrum use will be harmonized, as far as practical, with international and regional allocations and standards, to generate additional benefits in terms of access and economies of scale.

5G Americas agrees with the vision of Policy Statement 6 and suggests considering spectrum harmonization as a potential guide for developing a long-term spectrum roadmap for IMT bands. 5G networks will require access to a broader set of harmonized spectrum bands to provide sufficient capacity. Technical parameters for more use-cases and spectrum roadmaps can provide relevant information to plan future network investments.

Spectrum Management Framework Policy Statement 9. Radio frequency spectrum shall be provided for public telecommunications services, using a market-based approach to ensure an equitable return for use of the spectrum resources.

See comment on Spectrum Management Framework Policy Statement 2 and Spectrum Management Framework Policy Statements 41.



Spectrum Management Framework Policy Statements 22. Authority shall utilise a primary access licence type (spectrum licence) to authorise the exclusive assignment of spectrum for the operation of radiocommunications systems within a specified frequency band under specific conditions on a technology neutral basis, i.e., no restrictions will be placed on the type of technology used and Spectrum Management Framework Policy Statements 24. exclusive assignment under a spectrum licence shall mean the right to use the spectrum without precluding other productive uses of the spectrum, in areas or at times where the primary use is dormant, or where underutilised capacity can be shared.

See comments to Spectrum Management Framework Policy Statement 4 and Spectrum Management Framework Policy Statement 5.

5G Americas thanks the TATT for the attention it has given to bring its vision on issues related to the development of telecommunications.

Without further ado, I greet you sincerely.

A handwritten signature in black ink, appearing to read "José F. Otero Muñoz".

José F. Otero Muñoz

Vice-president for Latin America & the Caribbean
5G Americas