

Appendix III. Decisions on Recommendations (DoRs) Matrix for Second Consultation Round

The following summarises the comments and recommendations received from stakeholders on the *Consultative Document on Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Second Round)* and the decisions made by the Authority to be incorporated into the final document.

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
1	1. Introduction	CCTL	CCTL welcomes the opportunity to provide input in this consultation process. The views expressed herein are not exhaustive. Failure to address any issue in our response, does not in any way indicate acceptance, agreement or relinquishing of CCTL's rights.		The Telecommunications Authority of Trinidad and Tobago (the Authority) appreciates CCTL's review of the consultative document and its comments and recommendations.
2	Maintenance History	CCTL	The Decisions on Recommendations (DORs)		The Authority acknowledges that the DoRs matrix, based on the first round of consultation,

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>Matrix based on the first round of consultation was re-issued on or around August 27, 2018. This was done to correct an oversight, and incorporate CCTL's response to the first round of the process.</p>		<p>was re-issued on August 27, 2018, incorporating CCTL's response to the first round of consultation, which had been mistakenly omitted.</p> <p>The DoRs were re-issued for an additional two weeks (August 27, 2018 – September 10, 2018), to allow all respondents to have the opportunity to consider the revised matrix which included CCTL's comments.</p> <p>CCTL is kindly asked to note that several of their comments in this second round were already raised by CCTL in the first round. As such, respondents had two weeks to review comments similar to those submitted by CCTL in this second round.</p> <p>All stakeholders were notified via email of the extended two weeks of consultation, and notification of the consultation extension was also advertised in the newspapers.</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>In light of the reissuing of the DORs, CCTL considers that a further round of consultation should be added to this process. As such, a revised second round consultation document should be issued. This is necessary to ensure the transparency of the process. This will also allow for a more thorough process with meaningful contributions, as other respondents will have the opportunity to consider and comment on the views of other stakeholders.</p>	<p>To ensure the transparency and robustness of the process, CCTL recommends that a third round of consultation be added to this process.</p>	<p>A review of the comments from the second round of consultation does not identify any comment or recommendation that warrants a third round of consultation.</p> <p>The Authority has the discretion to determine whether or not a third round of consultation is necessary, in accordance with its approved consultation procedures.</p> <p>In light of the above, the Authority does not agree that a third round of public consultation is warranted.</p>
3	1.2 Rationale	CCTL	<p>In its response to round one, CCTL sought to distinguish between quality of service standards (whether customer service</p>	<p>In establishing industry standards TATT should abide by the provisions of the Act.</p>	<p>The Authority does not agree with CCTL's assertion that technical standards are only related to technical systems. Technical standards are also established to ensure customers receive satisfactory quality of service</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>or network related) vs. technical industry standards. CCTL contends that quality of service standards are related to business efficiency and customer satisfaction, while technical standards are more established industry criteria or norms, related to technical systems.</p> <p>Based on this distinction, CCTL views making regulations related to customers service standards, and the establishment of technical standards, as distinct and separate processes. This distinction is captured in the Telecommunications Act. Section (78) (1)</p>		<p>(QoS) and, as such, are connected to customer satisfaction.</p> <p>For example, the draft Telecommunications (Network Quality of Services) Regulations includes the parameter Interconnection Link Answer Bid Ratio. This parameter measures the number of successful call attempts against the total number of call attempts between operators. This standard influences the consumer-related QoS call set-up success rate standard, which has a direct bearing on customers.</p> <p>The Authority agrees that promulgation of regulations and the establishment of technical standards require distinct and separate processes.</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>addresses the making of regulations, including quality of service standards, while Part V, Section (45) addresses technical industry standards.</p> <p>With respect to technical standards, Section 45 (1) provides that;</p> <p>“Subject to the other provisions of this Act, concessionaires and licensees may implement such technical standards as they deem appropriate and which are in conformity with accepted international standards.”</p> <p>and (2) states,</p>		

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>“Notwithstanding subsection (1), the Authority may identify, adopt or establish preferred technical standards.”</p> <p>The process to define technical standards is also addressed in Section (18)(1) which lists among the powers and or functions of the Office;</p> <p>(d) “establish national telecommunications industry standards and technical standards,”</p> <p>(f) “...advise the Minister on technical standards.”</p> <p>With respect to the making of regulations, the process is set out in Section 78(1). The process provides that</p>		

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>the Minister on recommendations from TATT make regulations, subject to negative resolution by Parliament.</p> <p>In the revised DORs, TATT concedes that these are separate and distinct processes, however it maintains that it intends to propose regulations relating to the establishment of industry standards, in the same manner as in proposing regulations relating to consumer rights and obligations. This is clearly contrary to the provisions of the Act as cited above. In establishing industry standards TATT should</p>		<p>The establishment of technical standards in this document and the implementation of QoS regulations are both interrelated and are essentially aimed at prescribing a satisfactory level of service to customers. These standards are predicated on section 45 of the Telecommunications Act of Trinidad and Tobago, Chap. 47:31 (the Act). Where the Authority is of the view that QoS regulations should also be established, it will do so in accordance with section 78 of the Act and the Authority's consultation procedures.</p> <p>The Authority is empowered under section 78 to "make such Regulations, ... as may be required for the purposes of the Act". CCTL is asked to note that the Authority is not limited to recommending only regulations listed in (a) to</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>abide by the provisions of the Act.</p> <p>Not only is what is being proposed by TATT contrary to the intentions of the Act, such regulations also run counter to industry trends. Technology developments have facilitated fundamental structural market shifts and resulting in the provision of services via the Internet. This has spawned new over the top service providers.</p>	<p>CCTL recommends that regulatory resources should be focused on addressing current industry issues, including how to address the market challenges posed by OTTs. In general, TATT should revisit its overall regulatory agenda, in light of</p>	<p>(k) of section 78 but can recommend any regulation it considers appropriate to give effect to the Act.</p> <p>Where the Authority considers it appropriate, it may propose the requisite recommendations for regulations on technical standards, in accordance with its powers to so do granted under the Act and the Authority's approved consultation procedures.</p> <p>The Authority notes that analogous services are being offered by over-the-top (OTT) providers. However, it is not intended that this document treat with the regulating of OTTs. A new section 1.5 entitled, "Scope", within the final document has been included to indicate that this document does not deal with the broadcasting technical QoS standards related to OTTs.</p> <p>Policies in relation to the provision of OTT services are currently on the regulatory agenda of the Authority and are being addressed via its consultative document, <i>Discussion Paper on</i></p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>Increasingly, consumers are opting to use the services of new, unlicensed over the top (OTTs) providers instead of the services of traditional broadcasters.</p> <p>OTT providers are not subject to the same rules and regulations as licensed providers. So while they are allowed to compete with licensed providers, any regulations relating to technical service standards would not relate to them. On the other hand, licensed providers, that are already disadvantaged given the uneven playing field in which they operate, would have to bear the additional</p>	<p>current market realities.</p>	<p><i>Net Neutrality and OTT Services in Trinidad and Tobago.</i> This discussion paper seeks to establish the regulatory regime for OTT services and the treatment of net neutrality.</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>costs of complying with such regulations.</p> <p>In the context of current market realities, CCTL is of the considered view that the market would be better served by focusing on and addressing current industry issues, such as how to address the market challenges posed by OTTs.</p> <p>With respect to regulations based on the consultation on consumer rights and obligation policy (CROP), despite the fact that this process was completed over three years ago, and regulations proposed are still pending, TATT claims that these pending regulations are still</p>	<p>Given that over three years have passed since the CROP document was published, and in light of the speed of industry and market transformation, we recommend that the recommendations set out in the July 2014</p>	<p>The regulations proposed pursuant to the <i>Consumer Rights and Obligations Policy (CROP) (2014)</i> are currently before the Authority's line Ministry for onward progression and promulgation. The draft regulations remain relevant to today's market and the Authority does not, therefore, consider it necessary to further revise and consult upon these regulations at this time.</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>relevant. TATT makes this claim without substantiating this position.</p> <p>TATT further argues (in the Revised DORs), that</p> <p>“.... Any revision to the CROP may imply a consequential revision to the attendant regulations. Hence the CROP document can be revisited, if required, subsequent to the enactment of the proposed regulations.”</p> <p>CCTL questions the rationale of proceeding to make regulations, which are binding on service providers (i.e. licensed providers), only to reopen the process due to the</p>	<p>CROP document are revisited through a new round of consultation, before proceeding to make regulations on dated policy positions.</p>	

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>regulations being based on dated policy prescriptions. A more efficient and transparent process would be to amend policy recommendations to take account of market trends before making regulations. This would also improve regulatory certainty.</p>		
4	1.2 Purpose	CCTL	<p>With respect to plans to propose regulations pursuant to the consultation on “Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Services in Trinidad and Tobago”, TATT maintains that such regulations would be consulted on in line with consultation procedures,</p>	<p>In establishing industry standards TATT should abide by the provisions of the Act, particularly sections 18(1), 45(1), and 45(2).</p>	<p>As stated earlier, where the Authority considers it appropriate, it may propose the requisite recommendations for regulations on technical standards, in accordance with the provisions of the Act and the Authority’s approved consultation procedures.</p> <p>The Authority intends to incorporate these standards into Schedule F of a Type 5 concession. Section 1.1 of the final document states: “This Broadcasting Technical QoS document also provides a much needed update to the broadcasting technical QoS indicators</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>before being submitted to the Minister for approval by Parliament.</p> <p>CCTL reiterates the points made above with respect to the distinction between the process to recommend and approve regulations, including general quality of service regulations, as opposed to the process for establishing technical industry standards.</p>		<p>referenced in Schedule F of a Type 5 concession, under which subscription broadcasters are authorised.” Section 2.1 is also instructive in this regard, as it states: “The Authority shall incorporate these standards into Schedule F of a Type 5 concession for the quality requirements of an analogue cable television system.”</p> <p>Sections 2.2.1, 2.2.3 (formerly 2.3), 3.1 and 3.2 of the document have also been amended to make it clear that it is intended that these standards be incorporated into Schedule F of a Type 5 concession.</p>
5	Concluding Comments	CCTL	CCTL looks forward to providing further input in subsequent phases of this process.		
6	2.2.1	Digicel	The assumptions of “Maximum Recommended Delay” made in Table 1 are highly dependent on the STB features and enhancements. Specifically	We recommend to have the start time increase to a maximum of 60 seconds in order to	In relation to the system start-up time, the Authority does not agree with Digicel’s recommendation to increase the maximum recommended delay to 60 seconds. The maximum recommended delay of 10 seconds,

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>the startup time comprises of the OS boot sequence/self-check, welcome graphics, software update checks, last channel multicast joins, etc.</p> <p>These are all geared to improving the QoE to the customers using the services.</p>	<p>facilitate future addons to the service.</p>	<p>specified in Table 2 (formerly Table 1) in the final document, is consistent with the <i>DSL Forum Technical Report TR-126 Triple-play Services Quality of Experience (QoE) Requirements 13 December 2006</i>. Also, a maximum of 60 seconds for this standard may be unreasonable to a customer.</p> <p>It is expected that the service provider will manage any delays attributed to future add-ons to the service, to ensure that the maximum delay does not exceed 10 seconds. For example, decisions can be made in the choice of STB and/or the amount of boot information stored on the network (as opposed to the STB) in order to maintain a system start-up time within the prescribed standard.</p>
7	2.2.1	Digicel	<p>Referencing table 1, the ability to capture these "User Action" from every customer's STB doesn't currently exist. Sufficient time will be needed to assess with the vendors</p>	<p>Can the Authority clarify if these metrics are required from ALL customers' STB or is it via a standard test of the services?</p>	<p>The Authority will not require metrics from all customers. Instead it will, from time to time, conduct standards testing. Section 2.2.3.2 (formerly section 2.2.1.2) of the document, which refers to table 2 (formerly table 1), has been amended to reflect this accordingly, as follows: "Compliance testing of these standards</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			their ability to collect and report on these metrics.	If this data is required from every STB then a cost/benefit analysis should be completed as this ability does not exist currently and it may or may not be technically possible.	shall be carried out from time to time at both the headend and at a customer's STB."
		TSTT	Telecommunications Services of Trinidad and Tobago Limited (TSTT) welcomes the opportunity to comment on the second round of this consultation document "Broadcasting Technical Quality of Service Standards". It should be noted that the comments expressed by TSTT on this document in no way constrains TSTT from making further comments in the future.		The Authority appreciates TSTT's review of the document and its comments and recommendations.

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
		TSTT	TSTT notes TATT's statement that this document is a subset of its Consumer Rights and Obligations Policy (CROP) 2014. However, philosophically, this seems at odds with, and inconsistent with the referenced document.	TATT should overhaul this document, reviewing it so that its proposals are in line with the customer-perceived network performance criteria.	<p>The Authority has an overall mandate to promote and protect the interest of consumers. This document, along with CROP and other QoS standards, is geared towards ensuring a satisfactory level of customer service in both the telecommunications and broadcasting sectors.</p> <p>The Authority disagrees with TSTT that this document is “at odds with, and inconsistent with” the CROP document. TSTT is asked to note that this document is intended to complement CROP and to prescribe technical parameters and standards for television broadcasting services which are not included in CROP.</p> <p>CROP specifically states: “It should be noted that the standards for quality maintenance of broadcasting services will be defined in a subsequent policy framework to be published by the Authority.”</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>The CROP 2014 document takes a technology-neutral approach to the definition of standards. In that way, regardless of the variances in the underlying technology used in the delivery of the service, the service providers are obliged to provide the same quality of service to their customers. As an example, regardless of the mobile technology used, be it GSM, CDMA, UMTS, or LTE, mobile operators are</p>		<p>This document is the “subsequent policy framework”.</p> <p>Whilst, not all broadcast technical QoS standards are inherently directly related to customer-perceived network performance criteria, all such standards can be used to ensure that quality service is delivered to the customer.</p> <p>The ITU’s definition of technology neutrality, as referenced in the Authority’s <i>Guiding Principles for Regulatory Decision Making</i>, states: ‘Technology Neutrality.....“that different technologies offering essentially similar services should be regulated in similar manners. However, technologies offering similar services do not necessarily have similar features in all aspects, and exactly identical regulations may, therefore, result in the advantage of one technology over another in the market. Technology neutral regulation can, consequently, include slightly differing</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>required to provide the same quality of service targets for dropped calls, blocked calls etc. In this way, the evaluation of services are unbiased by any particular preference for technology and ensures the continued application of the relevant metric as operators' technology solutions evolve.</p> <p>Indeed, Section 3.1.1 of CROP states that "...Network Performance, for purposes of this document, is limited to the Quality of Service received or rather, perceived, by the consumer..."</p>		<p>regulations for different technology solutions in the same market segments." ' (TATT 2015)</p> <p>The Authority is, therefore, guided by the above definition of technology neutrality when making regulatory decisions.</p> <p>QoS parameters and standards for the different types of technologies can be found in the ITU Recommendations and other international standards specific to the type of technology.</p> <p>In developing the document, the Authority considered the various technologies employed and associated technical QoS standards.</p>
		TSTT	TSTT notes that this document adopts a	TATT should depart from technology-	The Authority's technology neutral approach allows operators the latitude to employ

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>technology-centric approach which purports to demand different service demands on service providers based on the technology used. It even goes on to suggest in Section 2.2.2 that for technologies for which TATT is unfamiliar, there is now an additional requirement – not outlined in the formal process of application – which the operator must provide its own QoS plan. This is essentially the opposite of the philosophical approach used by TATT in all of its prevailing regulatory and policy framework including:</p> <ul style="list-style-type: none"> • The Authorisation Framework 	<p>specific benchmarks which create regulatory lacunas within its framework of oversight. These lacunas will lead to regulatory arbitrage that will compromise its ability to function effectively.</p>	<p>technologies that they consider suitable for delivering services. However, this approach does not mean that the same standards would be relevant or applicable for different technologies that offer the same service. This is particularly evident in the provision of broadcasting services. For example, standards for QAM-based HFC networks are not applicable to IP networks (that provide IPTV), even though both networks are used to offer subscription television services.</p> <p>The Authority agrees that the document seeks to define the QoS standards based on the specific technology employed. As stated above, this approach, using technology-based benchmarks, is in line with the ITU's definition of technology neutrality and, as a consequence, the ITU's Recommendations and other international standards used are specific to the technologies employed.</p> <p>The Authority does not agree that technology-specific benchmarks create regulatory lacunas.</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<ul style="list-style-type: none"> • CROP, and the proposed CQOS Regulations, • Its Concession, • The Interconnection Policy and Regulations, • The Access to Facilities Policy and Regulations, • The Universal Service Policy and Regulations • The Fees Policy and Regulations, • The Costing Methodology, among others. <p>The weakness of this philosophy is admitted by TATT in the DoRs in response to Digicel's comment on this question: by acknowledging that technologies that exist in</p>	<p>TATT should not attempt to establish a requirement that is outside of the defined process for application (Section 2.2.2). This</p>	<p>It is common practice for the Authority to adopt generally accepted international standards. However, in relation to new technologies, where international standards have not been established, it is common practice for operators using this new technology to submit their QoS</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
			<p>the market can deliver broadcast services, but exempting those technologies from the oversight of this framework, would establish a condition where TATT would be in breach of its obligations pursuant to Section 3 of the Act – TATT would be treating similarly situated concessionaires unequally.</p> <p>TSTT recommends that TATT abandon this change in philosophy, and return to the tenets outlined in its policies prior – of technology neutrality in its regulatory functions.</p>	<p>creates a process which is biased against new technologies/ new operators and is thus ultra vires the Act.</p> <p>In accordance with Section 3 of the Act, TATT should revert to its principle of technology neutrality and ensure that the benchmarks applied to all similarly categorised broadcast services are the same regardless of technology. That is;</p> <ul style="list-style-type: none"> • all Free to Air radio services should have the same QoS reception requirements, 	<p>plan for the regulators' consideration. This is consistent with international best practice. As such, the Authority will require operators to submit proof-of-performance plans for its consideration, to ensure that such systems enable subscribers to receive good quality signals/service.</p> <p>The standards in this document treat with the contemporary technologies used to provide television broadcasting services in Trinidad and Tobago.</p> <p>TSTT is asked to note that section 2.2.2 allows operators to implement appropriate QoS standards with the approval of the Authority. The Authority utilises this approach to ensure the consideration of both contemporary and new technologies. Additionally, as new technologies are employed, the Authority will revise this document and consult upon it accordingly, to keep in line with international best practice and the recommended standards</p>

Document Name: Broadcasting Technical Quality of Service Standards: Subscription and Free-to-Air Television Broadcasting Services in Trinidad and Tobago (Version 1.0)

Item	Section	Stakeholder	Comments	Recommendations	TATT's Decision
				<ul style="list-style-type: none"> • all Free to Air TV services should have the same QoS reception requirements, and • all subscription broadcast services should have the same QoS reception requirements. 	<p>prescribed by the ITU. The Authority disagrees that this approach is <i>ultra vires</i> the Act.</p> <p>It should be noted that radio broadcasting is an entirely different service to television broadcasting, as the former is audio only and the latter is audiovisual. As such, these two broadcasting service categories are not similar and the treatment of QoS standards is different. It should also be noted that the current QoS standard for FTA radio is minimum received signal field strength.</p>