



# Commission Updated Frequency Authorisation Terms & Conditions

Consultation Document

Consultation

Publication date:	[20 October 2022]
Closing date for responses:	[27 November 2022]
Reference Number:	4/2022

# About this document

The Telecommunications Regulatory Commission of the Virgin Islands (Commission) is a statutory body responsible for regulating the telecommunications sector of the Virgin Islands. One of the Commission's duties relate to spectrum management where the Commission ensures that the radio spectrum is used efficiently, limiting interference between users and maximising benefit to consumers. As part of this, the Commission authorises the use of spectrum through the issuance of frequency authorisations.

Currently each of the three mobile service providers in Virgin Islands hold two mobile spectrum frequency authorisations, one of which is due expire this year with the other one due to expire in 2031.

The Commission has identified a need to review the frequency authorisation which is due to expire to ensure the terms and conditions are up-to-date and more consistent with the other frequency authorisations going forward. The updated frequency authorisation may then also serve as a template for future spectrum awards and frequency authorisation renewals.<sup>1</sup>

Given this, the Commission has developed an updated frequency authorisation template, which it now wishes to consult on. In this document, the Commission sets out, for consultation, its preliminary views on:

- The objectives of and approach to the review of the frequency authorisation;
- The key proposed updates to the terms and conditions in the frequency authorisation; and
- The draft updated frequency authorisation template.

Once the Commission has received and considered responses to this consultative process, it will finalise the frequency authorisation template, taking into account the stakeholder feedback received to this public consultation.

---

<sup>1</sup> For the avoidance of doubt, this review process has no bearing on the frequency authorisations that are due to expire in 2031 (i.e., the terms and conditions within those frequency authorisations will continue to apply until the expiry of those frequency authorisations).

# Contents

Instructions for submitting a response

Consultation questions

Glossary / Interpretations

**Part A.** Context and objectives of this review

1. Background and objectives
2. Structure of this document

**Part B.** Legal framework as applicable to frequency authorisations

**Part C.** Approach to updating the frequency authorisation

**Part D.** Key proposed updates to the frequency authorisations

1. Revised terms and conditions
2. Additional Schedules included in the frequency authorisation

**Part E.** Draft frequency authorisation

## Instructions for submitting a response

The Commission invites comments on this consultation document from all interested parties. To facilitate this, the Commission has set out seven specific consultation questions on the proposed updates to the frequency authorisation template, which is appended to this Consultation Document. Each respondent should include a completed cover sheet (set out on the next page) as part of its consultation response to the Commission.

Comments should be submitted by 27 November 2022 in line with the guidelines for conducting consultations set out in the Telecommunications Code (Part 1) (Public Consultations and Public Hearings) Guidelines, 2010. The Commission reserves the right not to consider any responses submitted after this date.

Preferably, responses to this document should be sent by email to [consultations@trc.vg](mailto:consultations@trc.vg) (indicating the subject): “*Consultation on the updated Frequency Authorisation Terms & Conditions*”. Alternatively, the responses may be sent to the address (or the number) below:

Consultation on the *updated Frequency Authorisation Terms & Conditions* – Telecommunications Regulatory Commission P.O. Box 4401 or 27 Fish Lock Road, 3rd Floor Road Town, Tortola, British Virgin Islands VG 1110.

Responses should include:

In the case of responses from corporate bodies (legal persons):

- the name of the company/institution/association/other organisation;
- the name of a principal contact person; and
- full contact details (physical address, postal address, telephone number, fax number and email address).

In the case of responses from individual (natural) persons:

- the name of the person; and
- full contact details (including email).

In the interest of transparency, the Commission will normally make all submissions received available to public, subject to the confidentiality of the information received. The Commission will evaluate requests for confidentiality according to relevant legal principles.

Respondents are required to clearly mark any information included in their submission, which they consider to be confidential, and provide reasons why that information should be treated as such. Where information claimed to be confidential is included in a submission, respondents are required to provide both a confidential and a non-

confidential version of their submission. The Commission will determine whether information claimed to be confidential is to be treated as such and, if so, will not publish that information. In respect of information that is determined to be non-confidential, the Commission may publish or refrain from publishing such information at its sole discretion.

Once the Commission has received and considered responses to this consultative process, it will finalise the updated frequency authorisation template.

## Cover sheet for response to a Commission consultation

### BASIC DETAILS

Consultation title:  
To (Commission  
Contact):

Name of  
respondent:

Representing (self or organisation/s):

Address (if not received by email):

### CONFIDENTIALITY

Please tick below which part of your response you consider is confidential, giving your reasons why

Nothing

Name/contact details/job title

Whole response

Organisation

Part of the response

Details of Confidential Information

If you want part of your response, your name or your organisation not to be published, we can still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

### DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that the Commission can publish. However, in supplying this response, I understand that the Commission may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, the Commission can disregard any standard email text about not disclosing email contents and attachments.

The Commission seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

## Consultation questions

Please see below for a list of seven questions, which are stated throughout this consultation document. These are placed here so that you can know in advance what to expect through the document as you develop your considered responses.

1. Do you agree with the stated objectives for preparing an updated frequency authorisation template for assigning frequency bands to unitary licence holders for the provision of IMT services? If not, please explain which objectives should be eliminated or which further objectives should be considered and why.
2. Do you agree with the approach taken by the Commission to update the terms and conditions in the frequency authorisation? If not, please explain and justify what changes you propose to the overall approach.
3. Do you agree with the updated terms and conditions for the use of IMT spectrum set out in the draft frequency authorisation template? If not, please explain and justify what changes you propose to the draft terms and conditions.
4. Do you agree with the proposed minimum service requirements set out in Schedule B? If not, please explain and justify what changes you propose to these minimum service requirements.
5. Do you agree with the proposed cell site information requirements set out in Schedule C? If not, please explain and justify what changes you propose to the Schedule C requirements.
6. Do you agree with the proposed quality of service penalties set out in Schedule D? If not, please explain and justify what changes you propose to these penalties.
7. Are there any other concerns, interests or obligations that the Commission should consider including in these frequency authorisations? If so, please explain your reasoning in detail, along with providing supporting evidence, as may be applicable. In doing so, please specify the Section and/or Schedule under which you propose to include an additional provision.

Please provide your views on any other matters you consider relevant to this consultation.





## Glossary/Interpretations

In this document, unless the context otherwise requires, the listed abbreviations are to be read as having the meanings referenced below.

Abbreviations	Meaning
Act	Telecommunications Act 2006 (as amended) law of the Virgin Islands
AWS	Advanced Wireless Services
BCP	Business Continuity Plan
CCT	Caribbean Cellular Telephone Ltd.
Digicel	Digicel (BVI) Limited
DPRS	Disaster Preparedness and Response Strategy
Flow	Cable & Wireless (BVI) Limited
FWA	Fixed wireless access
GSMA	GSM Association
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IMT	International Mobile Telecommunications
LTE	Long Term Evolution (4G)
NDP	Network Deployment Plan
QoS	Quality of Service
SMF 2018	Spectrum Management Framework 2018 of the Virgin Islands
SSHWS	Saffir–Simpson hurricane wind scale
The Commission	The Telecommunications Regulatory Commission of the Virgin Islands

## Part A: Context and objectives of this review process

The section details the Commission's decision to prepare an updated frequency authorisation template used to assign frequency bands to unitary licence holders for the provision of International Mobile Telecommunications (IMT) services in the Virgin Islands.

### 1. Background and objectives

The Commission is a statutory body responsible for regulating the telecommunications sector of the British Virgin Islands.

Under section 6 of the Telecommunications Act 2006 (Act), the Commission has a broad range of duties and responsibilities. Much of this work is non-discretionary and is outlined in the Act. One of these duties relate to spectrum management where the Commission ensures that the radio spectrum is used efficiently, limiting interference between users and maximising benefit to consumers. As part of this, the Commission authorises the use of spectrum through the issuance of frequency authorisations.<sup>2</sup>

The Commission has issued IMT spectrum frequency authorisations to unitary licensees in the past. In particular, currently each of the three mobile service providers in Virgin Islands (CCT, Digicel and Flow) hold two IMT spectrum frequency authorisations:<sup>3</sup>

- A frequency authorisation covering frequency spectrum in the 850MHz, 900MHz, 1800MHz, 1900MHz and 2500MHz frequency bands. These were issued in July 2016, with a six year duration (i.e., expiring in 2022).
- A frequency authorisation covering frequency spectrum in the 700MHz, AWS-1, and 1800 MHz frequency bands. These were issued in August 2016, with a 15 year duration (i.e., expiring in 2031).

The Commission notes that the terms and conditions in both sets of frequency authorisations differ, with the terms and conditions set out in the second set of frequency authorisations being more comprehensive.

The first set of frequency authorisations are due to expire with the Commission having commenced the process of renewing them, following the process set out in section 24 of the Act.<sup>4</sup>

---

<sup>2</sup> Where appropriate, the Commission may also issue exemptions to allow spectrum use without a frequency authorisation.

<sup>3</sup> The Commission also develop and consulted on a frequency authorisation template in the context of the planned FWA spectrum award in 2018.

<sup>4</sup> The frequency authorisation from CCT and Cable & Wireless expired in May 2022, with Digicel's frequency authorisation to be expired in December 2022. The Commission seeks to renew all expired frequency authorisations at the same time and has therefore issued letters of extension to both CCT and Cable and

Given this, the Commission sees merits in reviewing the frequency authorisations now, in parallel to the renewal process, to ensure the terms and conditions are up-to-date and more consistent with the other frequency authorisations going forward.

The updated frequency authorisation may further serve as a template for future spectrum awards and frequency authorisation renewals. In particular, as set out in its annual Workplan for 2022/23<sup>5</sup>, the Commission is planning to release spectrum to support new and innovative wireless services as well as to address growing consumer demands for improved wireless network performance and evolving end user needs going forward.

For the avoidance of doubt, this review process has no bearing on the frequency authorisations that are due to expire in August 2031 (i.e., the terms and conditions within those frequency authorisations will continue to apply until the expiry of those frequency authorisations, unless the Commission engages the process outlined in section 23 of the Act).

Going forward, the Commission may seek to consolidate all IMT spectrum holdings of each unitary licensee into a single frequency authorisation. This would allow streamlining the frequency authorisations granted to licensees, with all assigned IMT spectrum being subject to the same terms and conditions. It would also allow making all IMT spectrum holdings co-terminus which facilitates spectrum management going forward. This would also streamline future spectrum awards, with any additional spectrum assigned in such awards being added to these frequency authorisations, rather than having to issue a separate frequency authorisation for the new spectrum. However, this consolidation process is currently not feasible as the frequency authorisations issued in August 2016 are only due to expire in 2031.

As such, in the interim, the Commission wishes to focus on increasing the consistency in the terms and conditions across the existing frequency authorisations and having an updated frequency authorisations template ready ahead of upcoming IMT spectrum awards.

The above objectives have guided the Commission's preparation of the frequency authorisation template set out in Part E.

**Question 1:** Do you agree with the stated objectives for preparing an amended frequency authorisation template for assigning frequency bands to unitary licensees for the provision of IMT services? If not, please explain which objectives should be eliminated or which further objectives should be considered and why.

---

Wireless extending their frequency authorisations until such time as the Commission renews the old authorisations.

<sup>5</sup> <https://www.trc.vg/wp-content/uploads/2022/06/2022-06-30-TRC-Work-Plan-Budget-2022-2023.pdf>

## 2. Structure of this document

The remainder of this document is structured as follows:

- Part B presents the legal framework as applicable to frequency authorisations in the Virgin Islands.
- Part C sets out the approach taken by the Commission in preparing the updated frequency authorisation template.
- Part D provides an overview of the key updates made to the terms and conditions contained in the frequency authorisations which are due to expire in 2022.
- Part E contains the draft frequency authorisation template.

## Part B: Legal framework for updating frequency authorisations

The legal framework for spectrum policy and management is given in the Telecommunications Act, 2006. Under the Act the Minister with responsibility for telecommunications (“Minister”) is responsible for developing and reviewing telecommunications policies and international matters affecting the Virgin Islands including international, regional and bilateral frequency co-ordination (section 4 of the Act). The Commission advises the Minister on policy matters (section 6(a) of the Act). The Commission makes recommendations to the Minister and implements a position statement and action plan.

The Commission has responsibility determining applications for licences and frequency authorisations and monitoring, enforcing and ensuring compliance therewith. (section 6(e) of the Act). Additionally, the Commission manages the spectrum (section 6(f) of the Act).

The Commission is the awarding body that grants frequency authorisations for spectrum. Any frequency authorisations will be granted according to section 19 of the Act and the Telecommunications Code (Part 5) (Granting Frequency Authorisations (Interim Procedure) Requirements, 2011. In particular, section 19(3) specifies that the Commission may grant or refuse any application for frequency authorisations based on applicable policies and the Regulations. Additionally, a frequency authorisation shall be consistent with the spectrum plan established pursuant to section 34 of the Act and shall allow the authorisation holder to use a certain frequency band or bands subject to such terms and conditions as may be set out in the frequency authorisation (section 19(8) of the Act).

The conditions which the Commission may include in a frequency authorisation are specified in section 21 of the Act, which states: *a frequency authorisation shall contain conditions regarding*

- (a) the expiration of the frequency authorisation and the time required for an application for renewal;*
- (b) the circumstances under which the frequency authorisation may be amended for reasons of force majeure, national security, changes in national legislation and implementation of international obligations and where the Commission, taking into account the public interest, otherwise deems amendment necessary in the public interest or to achieve the purposes of this Act;*
- (c) the use of the frequency band so authorised;*
- (d) the type of emission, power and other technical requirements for the radiocommunication service; and*

*(e) such other matters as the Commission may specify for such frequency authorisation.*

Additionally, it is judicious to consult on the updated frequency authorisation considering section 4(1) of the Telecommunications Code (Part 1) (Public Consultations and Public Hearings) Guidelines, 2010, which states:

*“(1) The Commission shall hold a public consultation on any matter prescribed by the Telecommunications Act, 2006 and may publicly consult on any other matter that could, in the opinion of the Commission, have a significant effect on the telecommunications sector of the Virgin Islands or a significant part thereof including any matter that could have a significant effect on the rights and obligations of users of telecommunications services.”*

## Part C: Approach to updating the frequency authorisation

This section describes the approach taken by the Commission in preparing the updated frequency authorisation template. The resulting key updates to the frequency authorisations which are due to expire in 2022 are then set out in Part D.

In line with its key objectives set out Part A above, the focus of this review process is to ensure the terms and conditions in the frequency authorisation are up-to-date and more consistent with those contained or found in the other frequency authorisations going forward.

In particular, starting with the terms and conditions set out in the frequency authorisations which are due to expire in 2022, the Commission has compared these to the terms and conditions set out in both: (i) the frequency authorisations issued in August 2016, and (ii) the draft frequency authorisation prepared for the planned spectrum award in 2018.<sup>6</sup> This has resulted in several terms and conditions being revised, added or removed to ensure greater consistency in the frequency authorisations.

The Commission has further conducted a review of the terms and conditions from a legal, technical and policy/regulatory point of view to ensure they are reflective of the current regulatory and legal framework for the telecommunications sector in the Virgin Islands, the Commission's policy objectives for the sector, and the national policy with regard to business continuity of critical infrastructures amongst which are telecommunications infrastructures. This has resulted in further revisions to the frequency authorisation.

**Question 2:** Do you agree with the approach taken by the Commission to update the terms and conditions in the frequency authorisation? If not, please explain and justify what changes you propose to the overall approach.

---

<sup>6</sup> <https://trcwebapp.aress.net/wp-content/uploads/2020/12/Frequency-Authorization-template-DRAFT-27-07-18.pdf>

## Part D: Key proposed updates to the frequency authorisations

In this section, the Commission provides an overview of the key updates made to the terms and conditions contained in the frequency authorisations which are due to expire in 2022. In doing so, the Commission only highlights the main changes to the frequency authorisation. Further, where terms and conditions have remained unchanged this is not outlined below.

The Commission strongly encourages respondents to read the draft frequency authorisation template presented in Part E in its entirety, prior to submitting comments or answering the consultation questions, as this summary is not exhaustive.

### 1. Revised terms and conditions

Below the Commission provides an overview of the main updates to the terms and conditions contained in Chapter 1 to Chapter 3 of the draft frequency authorisation template. Further details on all terms and conditions can be found in the draft frequency authorisations (see Part E below).

- **Definitions/Interpretations.** The Commission has revised the definitions/interpretations set out in Chapter 1. This is to ensure consistency with those contained in other frequency authorisations and the unitary licences, as well as to provide more clarity on some of the terms contained in the draft frequency authorisation template. Interested parties are referred to the draft template in Part E to review the revised set of definitions/interpretations.
- **Renewal process and right to terminate.** The Commission has updated Section 2.2 of the draft frequency authorisation by providing more clarity on the renewal process (see new clauses 2.2.3.3 and 2.2.4). The Commission has also added clause 2.2.2, 2.2.6 and clause 2.2.7.
  - Clause 2.2.2 specifies the time by which a licensee needs to submit its renewal application to the Commission prior to the expiration of the current frequency authorisation.
  - Clause 2.2.6 allows the Commission to terminate a frequency authorisation in case of material change in the ownership of the frequency authorisation holder. The Commission recognises that selected unitary licensees objected a similar clause in the context of the 2018 spectrum award; however, the Commission remains of the view that this is a common clause in frequency authorisations which aims to prevent one party gaining access to more spectrum than foreseen.
  - Clause 2.2.7 enables the Commission to act in case there is evidence that frequency authorisation holders are not utilising any of the spectrum bands assigned to them. Again, the Commission considers this 'use it or lose it' clause to be a common clause and of key importance to allow it



to manage spectrum effectively, which is a key objective of the Spectrum Management Framework (SMF).<sup>7</sup>

- **Payment of Fees.** The Commission has updated Section 2.3 of the draft frequency authorisation to better align the wording to those set out in the August 2016 frequency authorisations. As set out in Clause 2.3.1 an annual fee of US\$ 1,400 per MHz will now be due and payable in relation to these frequency spectrums assigned. In line with the SMF, the Commission sees merits in imposing annual fees on all frequency spectrum assigned. This is because spectrum is a valuable and scarce resource and therefore it is reasonable and appropriate for a fee to be charged, notwithstanding the fact that this spectrum previously carried no cost, to encourage the efficient use of such spectrum and allow the Commission to recover any costs related to spectrum management activities.

The level of the annual fee has been set equal to the annual fee applicable to the frequency spectrum assigned under the other frequency authorisations, expiring in 2031. This is to ensure consistency between both frequency authorisations and the general position on annual fees for frequency spectrum, set out in the SMF.

- **Requirement to furnish information.** Clause 2.4 of the draft frequency authorisation template sets out the information, which the licensee needs to provide to the Commission on a regular basis. This represents an enhanced set of information, compared to that set out in the August 2016 frequency authorisation, taking into account the information needs for the regular quality of service audits to be conducted by the Commission.
- **Force Majeure.** The Commission has edited the provisions around force majeure in Clause 2.6 to create clear and enforceable obligations, taking into account the experience of the Commission after Hurricanes Irma and Maria in 2017. The increasing likelihood of severe storms, such as those, due to climate change, necessitate a more comprehensive provision. These changes also reflect changes made to the unitary licence template earlier this year.
- **Applicable law and severance.** Clause 2.13 was added to provide greater clarity on the legal framework applicable to the frequency authorisation template, and to allow for the preservation of remaining, valid parts of the frequency authorisation in the event any other provisions are found to be invalid or unenforceable.
- **Use of Spectrum.** Clause 3.1 was updated to provide more clarity on the scope of harmful interference (now also referring to neighbouring countries, see clause 3.1.1). Clauses 3.1.2 and 3.1.4 have been added to introduce the

---

<sup>7</sup> See, for example, Section 1.1. of the Commission's 2018 SMF, available here: <https://www.trc.vg/wp-content/uploads/2020/12/SMF-2018-Final-Doc-Post-Consultation-050318-TRK-004.pdf>

additional requirements set out in the new Schedules added to the frequency authorisation template (see section 2 below). This includes, amongst others:

- revised minimum service requirements (Schedule B discussed in section 2.2 below);
  - the need to provide a Cell Site Information Plan (Schedule C discussed in section 2.3 below); and
  - the need to provide a **Disaster Preparedness and Response Strategy (DPRS) and Business Continuity Plan (BCP)** detailing how the licensee will continue its operation in case of a (natural) disaster. This is a new requirement, not contained in the current frequency authorisations. However, they formed part of the draft frequency authorisations for the planned spectrum award in 2018 and have therefore been consulted on before. BCPs are a common requirement for mobile network operators around the world.<sup>8</sup> Given the high risks of hurricanes in the Virgin Islands and their devastating effects, the Commission considers there to be a heightened need for each licensee having a DPRS and BCP. The BCP and related procedures will have to be in line with the requirements of ISO 22301<sup>9</sup>, which is the international recognized standard for Business Continuity Management Systems.
- **Requirement to build hurricane proof sites.** Clause 3.2.1.3 of the draft frequency authorisation template sets out that all cell sites have to be designed, constructed and maintained in such a way that they either can withstand a hurricane of Category 5, as defined by the Saffir–Simpson hurricane wind scale (SSHWS) or be restored as expeditious as possible after any hurricane has passed the Territory. This again is a new requirement, not contained in the current frequency authorisations. However, it also formed part of the draft frequency authorisations for the planned spectrum award in 2018 and have therefore been consulted on before.<sup>10</sup> In light of the industry feedback on a similar clause at the time, the Commission has removed the reference to the need to restore the network within five days after any hurricane has passed the Territory.

---

<sup>8</sup> See, for example, consideration 94: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L1972&from=EN> and

<https://www.marketscreener.com/quote/stock/SAUDI-TELECOM-COMPANY-6497838/news/Saudi-Telecom-Having-met-the-ISO-certification-standards-issued-by-the-British-Standards-Institute-36613761/>

<sup>9</sup> Security and resilience – Business continuity management systems – Requirement; ISO/DIS 22301.

<sup>10</sup> For example, at the time, the Commission stated the following in response to industry feedback that Category 5 proof site requirements would be unreasonable: “*The Commission wishes to clarify that a loaded (rather than unloaded) site should be category 5 proof. Whilst this requirement could be considered as a financial burden, the Commission sees it necessary to ensure that the FWA networks are capable of resisting a category 5 hurricane, so as to prevent future network outages. The Commission further notes that it may be commercially feasible to deploy category 5 proof loaded towers as, for example, Cable and Wireless Communications has announced in June 2018 that it has invested in new mobile towers ‘built specifically to withstand category five wind conditions’ as part of its reconstruction and restoration programme in Dominica, British Virgin Islands (BVI) and Anguilla.*”

- **Maintenance of Technical Records.** Clause 3.3 of the draft frequency authorisation template has been updated to refer to the cell site information plan of Schedule C and reference to the information needed by the Commission to assess the compliance distance provided by the authorisation holder in order to ensure that members of the general public will not be exposed to levels of electromagnetic fields that exceed the exposure limits recommended by International Commission on Non-Ionizing Radiation Protection (ICNIRP)<sup>11</sup> (clause 3.3.1.1).

**Question 3:** Do you agree with the amended terms and conditions for the use of IMT spectrum set out in the draft frequency authorisation template? If not, please explain and justify what changes you propose to the draft terms and conditions.

---

<sup>11</sup> <https://www.icnirp.org>

## 2. Additional Schedules included in the frequency authorisation

The draft frequency authorisation template contains five Schedules, each of them is briefly discussed below.

### 2.1 Schedule A: The Assigned Frequency Bands

This schedule sets out the frequency bands assigned to the frequency authorisation holder in a tabular format. This Schedule is in line with Schedule A contained in frequency authorisations issued in August 2016.

### 2.2 Schedule B: Minimum Service Requirements

Schedule B of the draft frequency authorisation template sets out the minimum service requirements. These are similar to the minimum service level requirements set out in Schedule B of the frequency authorisations issued in August 2016. However, the Commission has updated some of the requirements in line with current IMT service coverage levels and to ensure that end-users are able to access enhanced IMT service offerings, consistent with the capabilities of IMT technologies available. The key updates to the minimum service requirements are summarised in the table below.

**Table 1: Minimum service requirements**

Indicator	Requirement	Explanation / Comments
Geographic coverage	95% of locations within any area of 100m by 100m a IMT service to users, when that network is lightly loaded	In order to ensure that practically all geographic areas in the Virgin Islands which are accessible to the public are covered the Commission sees merit in increasing the required level of geographical coverage from 90% to 95%. This will allow achieving mobile coverage in even the most remote uninhabited, but accessible geographic areas of the territory, which will enable end users to practically use their mobile phones everywhere in the Virgin Islands to, for instance, call emergency and/or other essential services.
Population coverage	At least 98% of the population of each of the islands of Tortola, Anegada, Jost Van Dyke and Virgin Gorda	The Commission further sees a need to increase the required population coverage level from 95% to 98%. In doing so, also the most remote, habited parts of the territory will have mobile service coverage. The combination of geographical and population coverage leads to a situation in which everybody in the Virgin Islands can use their mobile phones in their homes, other premises, and in any accessible location.

<b>Minimum speeds</b>	<p><u>Within 12 months:</u> A downlink speed of not less than 30 Megabits per second and an uplink speed of not less than 8 Megabits per second</p> <p><u>Every subsequent 12 month period:</u> A minimum downlink speed, uplink speed and round-trip latency of not less than the mean global downlink speed, uplink speed, and round-trip latency as published by the Commission at the start of the period, taking into account internationally recognized enterprises/organizations such as Ookla, Open Signal and/or the International Telecommunications Union (ITU).</p>	<p>The Commission sees merits in updating the minimum downlink/uplink speed requirements to those currently achieved elsewhere (i.e. the 30/8 Megabits per second values reflect the current median values of the Speedtest Global Index<sup>12</sup>).</p> <p>The Commission further sees a need to adjust the minimum speed targets on an annual basis in line with the speeds achieved elsewhere.</p>
<b>Latency</b>	A round-trip latency of 30 milliseconds or less.	Given the importance of low latency for mobile Internet access, e.g. loading web sites, geographical maps and gaming, the Commission sees merit in decreasing the latency to a level commonly achieved elsewhere (i.e., the 30 milliseconds reflect the current median latency value of the Speedtest Global Index <sup>13</sup> ).
<b>Packet loss</b>	A maximum packet loss of 1%.	Low packet loss is important for highly interactive applications. The 1% standard for average packet loss is commonly accepted as the point at which highly interactive applications such as voice over Inter Protocol (VoIP) services and video-conferencing experience significant degradation in quality according to industry publications and international standards. <sup>14</sup> For this reason, the Commission sees a need to align this minimum service requirement with the 1% standard.
<b>Fault Recovery Rate</b>	A Fault Recovery Rate, as defined in the unitary licence of 90% within 24 hours and of 95% within 72 hours for every day of the year during the term of the frequency authorisation.	These targets are in line with those contained in the draft 2018 frequency authorisations. The Commission considers these targets to remain adequate.

**Question 4:** Do you agree with the proposed minimum service requirements set out in Schedule B? If not, please explain and justify what changes you propose to these minimum service requirements.

<sup>12</sup> <https://www.speedtest.net/global-index>

<sup>13</sup> <https://www.speedtest.net/global-index>

<sup>14</sup> For example, adopted by the FCC Office of Engineering and Technology (OET); see also the following ITU document: [http://www.itu.int/dms\\_pubrec/itu-r/rec/m/r-rec-m.1079-2-200306-i!!msw-e.doc](http://www.itu.int/dms_pubrec/itu-r/rec/m/r-rec-m.1079-2-200306-i!!msw-e.doc)

## 2.3 Schedule C: Cell Site Information Plan

This schedule sets out the information requirements for each cell site deployed by the frequency authorisation holder. As such, this Schedule replaces the network deployment plan (NDP) contained in Schedule C of the frequency authorisations issued in August 2016.

The Commission has expanded the sets of information required for each cell site by requiring all relevant information needed to enable the Commission to assess whether members of the general public could be exposed near a cell site to electromagnetic fields exceeding the exposure limits of ICNIRP.

Given the growing concerns of the public on the effects of 4G and 5G on health, telecommunications regulatory authorities around the world have established regulations on the exposure to electromagnetic fields. Further, telecommunications regulatory authorities are actually monitoring compliance distances of cell sites and the measures taken by mobile operators to prevent the general public being exposed to levels of electromagnetic fields above the exposure limits of ICNIRP<sup>15</sup>. For this reason, the Commission sees merit in requiring the same information that is required elsewhere. Unitary licensees in Virgin Islands have or should have all of this information so making it available to the Commission requires no additional efforts.

There is further a requirement for frequency authorisation holders to provide annual updates of their cell site information plan to the Commission. This is to ensure that the Commission has access to up-to-date information on the cell sites deployed by each unitary licensee.

**Question 5:** Do you agree with the proposed cell site information requirements set out in Schedule C? If not, please explain and justify what changes you propose to the Schedule C requirements.

## 2.4 Schedule D: Penalties

This schedule sets out the penalties in case of the frequency authorisation holder not meeting the minimum service requirements set out in Schedule B.

As stated in Schedule D, the Commission will conduct regular reviews/audits of quality of service (QoS) offered by each frequency authorisation holder, to assess compliance in line with the quality of service measurements set out in Schedule B. These will be undertaken on a quarterly basis.

---

<sup>15</sup> See for instance Ofcom UK (<https://www.ofcom.org.uk/spectrum/emf/policy>) and the Australian Communications and Media Authority (<https://www.acma.gov.au/our-rules-eme>).

In case these reviews/audits result in the relevant frequency authorisation holder not meeting any of its quality of service requirements, the Commission will impose penalties based upon the penalty regime set out in Schedule D. The penalties in case of non-compliance with the quality of service requirements are as follows:

**Table 2: Proposed quality of service penalties**

QoS parameter	Target level	Penalty
Minimum speeds	> 95% of measurements	USD 4,000 for each percentage point below the target level
Latency	> 95% of measurements	USD 1,000 for each percentage point below the target level
Maximum packet loss	> 95% of measurements	USD 1,000 for each percentage point below the target level
Fault recovery rate 24 hours	> 90% of failures	USD 1,000 for each percentage point below the target level
Fault recovery rate 72 hours	> 95% of failures	USD 1,000 for each percentage point below the target level

**Question 6:** Do you agree with the proposed quality of service penalties set out in Schedule D? If not, please explain and justify what changes you propose to these penalties.

## 2.5 Schedule E: Business Continuity Plan

This schedule will contain the frequency authorisation holder's BCP, in line with the requirements set out in section 3.1.2 of the frequency authorisation template.

**Question 7:** Are there any other concerns, interests or obligations that the Commission should consider including in these frequency authorisations? If so, please explain your reasoning in detail, along with providing supporting evidence, as may be applicable. In doing so, please specify the Section and/or Schedule under which you propose to include an additional provision.

Please provide your views on any other matters you consider relevant to this consultation.

## Part E: Draft Frequency Authorisation



### TELECOMMUNICATIONS REGULATORY COMMISSION RADIO FREQUENCY AUTHORISATION

Authorisation Number [XXX]/ [XXX] 2022

DATE OF ISSUE: [Day] [Month] 2022  
DATE OF EXPIRATION: [Day] [Month] 2037

#### Table of Contents

Chapter	Title
1	Terms and Conditions
2	General Conditions
3	Conditions Specific to the Use of the assigned Frequency Bands
Schedule A	Assigned Frequency Bands
Schedule B	Minimum Service Requirements
Schedule C	Cell Site Information Plan
Schedule D	Penalties
Schedule E	Business Continuity Plan

The Telecommunications Regulatory Commission (the *Commission*) **HEREBY ISSUES** this Frequency Authorisation to **NAME OF COMPANY** (the *Authorisation Holder*) for the use of the spectrum contained in the assigned frequency band in the Virgin Islands in accordance with the Telecommunications Act, 2006 (the *Act*) and subject to the terms and conditions herein.



## **1. Terms and Conditions**

### **1.1. Interpretation**

1.1.1 In this Frequency Authorisation, unless indicated otherwise, the following words shall have the following meanings:

- 1.1.1.1. “assigned frequency band” means the frequencies authorised by the Commission for use by the Authorisation Holder under this Frequency Authorisation as identified in Schedule A hereto.
- 1.1.1.2. “Commission” means the Virgin Islands Telecommunications Regulatory Commission established under section 5 of the Telecommunications Act 2006
- 1.1.1.3. “Date of Issue” means the date of issue hereinabove written.
- 1.1.1.4. “Date of Expiration” means the date of expiration hereinabove written.
- 1.1.1.5. “facilities” means particular poles, masts, towers, roof-tops and other similar apparatus, power supply and back-up power supply, inclusive of buildings, which are used to host the equipment used by the Authorisation Holder to facilitate operations on the assigned frequency band.
- 1.1.1.6. ‘force majeure’ has the meaning set out in the Telecommunications Act, 2006.
- 1.1.1.7. “licence” means a licence granted under the Act;
- 1.1.1.8. “licensee” means a person to whom a licence has been granted;
- 1.1.1.9. “International Mobile Telecommunications” or “IMT” is the generic term used by the International Telecommunications Union (ITU) community to designate broadband mobile systems. It encompasses IMT-2000, IMT-Advanced and IMT-2020 collectively. The definition of this term is subject to such definition that may be published from time to time by the ITU.
- 1.1.1.10. “IMT services” are telecommunication services provided by means of IMT systems.
- 1.1.1.11. “significant interest” has the meaning set out in the Telecommunications Act, 2006.
- 1.1.1.12. “Unitary Licence” means a licence which allows a licensee to provide, deploy and operate multiple telecommunication services (i.e. fixed line, mobile, broadband and broadcast cable television services) under a single authorisation.

**1.2.** Except as specified in 1.1.1 above, the words and expressions used herein shall have the meanings given in the Act.

**1.3.** In this Frequency Authorisation, unless the context otherwise requires, any reference:

1.3.1 to the singular includes the plural and vice versa

1.3.2 to any statute or statutory provision shall be construed as a reference to that statute or statutory provision as from time to time amended, consolidated, modified, extended, re-enacted or replaced.

## **2. General Conditions**

### **2.1. Regulatory Framework**

- 2.1.1 The Authorisation Holder shall comply with the provisions of the Act in the operation or use of the assigned frequency band. The terms and conditions of this Frequency Authorisation shall be subject to the provisions of the Act.
- 2.1.2 The Authorisation Holder shall comply with all Regulations, with the Telecommunications Code, the terms and conditions of its licence, any lawful instructions from the Commission and all other instruments made under the Act and all relevant laws in force from time to time in the Virgin Islands.
- 2.1.3 The Authorisation Holder shall comply with any lawful directive issued by the Commission or any other person so duly authorised under the Act.

### **2.2. Term**

- 2.2.1 This Frequency Authorisation shall take effect from the Date of Issue and shall expire on the Date of Expiration (the *Term*).
- 2.2.2 An Authorisation Holder seeking to renew its Frequency Authorisation shall submit its duly completed renewal application to the Commission no later than one (1) year prior to the expiration of the Term.
- 2.2.3 The Commission alone shall determine whether, upon expiration of the Term, this Frequency Authorisation shall be renewed. In deciding whether to renew this Frequency Authorisation, the Commission shall take into account:
  - 2.2.3.1. the conduct of the Authorisation Holder during the Term or during the term of any licence granted by the Commission to the Authorisation Holder; and
  - 2.2.3.2. whether the Authorisation Holder failed to comply materially with the Act, the Telecommunications Code, the terms of this Frequency Authorisation, its licence, any instructions from the Commission and any lawful directive of the Commission.
  - 2.2.3.3. the spectrum policy in the Virgin Islands, the Spectrum Management Framework (SMF), the National Frequency Allocation Table (NFAT), and the Commission's view of the most efficient management of the assigned Frequency bands, as communicated to the industry from time to time.
- 2.2.4 Where the Commission renews this Frequency Authorisation, it reserves the right to change the Terms and Conditions thereof. In doing so, it will follow the provisions and process stipulated under section 23 of the Act.
- 2.2.5 This Frequency Authorisation shall terminate in the event the Authorisation Holder ceases to hold, for whatever reason, a licence for the operation of a telecommunications network providing telecommunications services in the Virgin Islands.
- 2.2.6 This Frequency Authorisation shall terminate in the event another IMT spectrum Authorisation Holder has gained a significant interest or decision-making power in the Authorisation Holder or Affiliate of the Authorisation Holder.

2.2.7 The Commission may, In the event of the Authorisation Holder not utilizing any spectrum covered by this Frequency Authorisation in line with the terms of this Frequency Authorisation, revoke the Authorisation Holder's right to use that spectrum.

### **2.3. Payment of Fees**

2.3.1 The Authorisation Holder shall pay to the Commission annual fees of US\$ 1,400 per MHz of the total frequency spectrum assigned as defined in Schedule A. Annual fees will be payable on the anniversary of the Date of Issue and the first payment of such fees shall be due upon grant of this Frequency Authorisation.

2.3.2 Notwithstanding 2.3.1. above, the Authorisation Holder shall pay to the Commission such fees applicable to the use of the assigned frequency band as the Commission may determine from time to time in accordance with the Act, Regulations, Telecommunications Code and the Authorisation Holder's Unitary Licence inclusive of application fees.

2.3.3 Subject to Regulations, fees payable by the Authorisation Holder under Article 2.3.1 above shall be payable from the Date of Issue.

### **2.4. Requirement to Furnish Information to the Commission**

2.4.1 The Authorisation Holder shall provide the Commission with usage, performance, actual quality of service and other relevant information on the IMT services provided to its IMT service customers in such manner and at such times as the Commission may request.

2.4.2 Without prejudice to the obligation of the Authorisation Holder to provide specific information to the Commission under the terms of this Frequency Authorisation, the Authorisation Holder shall provide the Commission with such information in such manner and at such times as the Commission may request in accordance with the Act.

### **2.5. Remedies for Non-Compliance**

2.5.1 Without prejudice to any other right of action available to the Commission under the terms of this Frequency Authorisation or under any other law or regulation, the Commission may take such action as it considers appropriate under the Act for a breach of any condition of this Frequency Authorisation.

2.5.2 If in the opinion of the Commission, the Authorisation Holder has engaged in any conduct identified in section 75(1) of the Act, the Commission may exercise such enforcement powers against the Authorisation Holder under section 75(2) of the Act.

### **2.6. Force Majeure**

2.6.1 The Authorisation Holder shall not be held liable for failure to comply with its obligations under this Frequency Authorisation to the extent, and only for so long as, such failure was directly attributed to an act of force majeure. The Authorisation Holder

shall use all reasonable endeavours to resume performance of its obligations as soon as practicable after its performance ceases to be hindered or prevented by the event of force majeure. For the avoidance of doubt, there are no circumstances in which failure to pay fees due hereunder will be attributed to an act of force majeure.

- 2.6.2 The Authorisation Holder shall notify the Commission as soon as practicable, and in any event within forty-eight (48) hours, or such longer period of time as may be agreed with the Commission, of the event which hinders or prevents the Authorisation Holder's performance of its obligations, of the obligations which it is hindered or prevented from performing, the reasons why, and the period of time during which the Licensee expects its performance to be so hindered or prevented. The Authorisation Holder shall notify the Commission immediately after its performance ceases to be hindered or prevented by an act of force majeure.
- 2.6.3 Neither the Commission nor the Authorisation Holder shall, by reason of the force majeure events noted above, be entitled to terminate the Frequency Authorisation, nor shall either Party have any claims for damages against the other, in respect of non-performance or delay in performance that is a result of the force majeure events. For the avoidance of doubt, there are no circumstances in which force majeure events will not cause extension in the period of the Frequency Authorisation.
- 2.6.4 As stipulated in section 89 of the Act, the Authorisation Holder may during a period of emergency in which public services are disrupted due to an act of force majeure,
- 2.6.4.1. use the assigned frequency band for emergency communications and in a manner other than as specified in this Frequency Authorisation; and
  - 2.6.4.2. at request of the government make available its facilities and/or telecommunications equipment and/or spectrum
- provided that such use is notified to the Commission, only persists during the declared period of emergency and is discontinued when it is possible to resume normal telecommunications services or until such special use of the assigned frequency bands is terminated by the Governor. The Authorisation Holder shall keep the Commission informed throughout the period of use and notify the Commission when such use is discontinued.
- 2.6.5 The Authorisation Holder shall comply with all relevant laws and regulations that may come into effect in the Virgin Islands in relation to disaster management or otherwise

## **2.7. National Security**

- 2.7.1 The Authorisation Holder shall, upon request by the Governor or otherwise in accordance with any relevant law, co-operate with the Governor or other official agency duly authorised by the Governor to the extent required in matters of law enforcement, public emergency or national security.
- 2.7.2 The Authorisation Holder shall make available to the Government, as authorised by the Governor, its facilities and or telecommunications equipment and/or spectrum for such

purposes as may be required under section 89 of the Act when a period of public emergency, as referred to in section 89 of the Act, has been declared.

## **2.8. Amendment**

2.8.1 This Frequency Authorisation may be amended by the Commission and otherwise in accordance with section 23 of the Act:

2.8.1.1. due to the effect of an act of force majeure, national security considerations, changes in national legislation or, subject to section 86 of the Act, the need to implement international obligations; or

2.8.1.2. if the Commission, taking into account the public interest, otherwise deems it necessary to achieve the purposes of the Act.

## **2.9. Assignment or Transfer**

2.9.1 The Authorisation Holder shall not, without the prior written approval of the Commission, such approval not to be unreasonably withheld transfer, assign or otherwise part with this Frequency Authorisation or any permission, right, obligation or benefit granted under this Frequency Authorisation.

2.9.2 Subject to section 20 of the Act, the Authorisation Holder shall not, without the prior written approval of the Commission, such approval not to be unreasonably withheld, enter into any agreement or other arrangement the effect or the purported effect of which would be to permit a person to acquire a significant interest in the Authorisation Holder, unless expressly provided for in any amendments or additions to the Act or any Code or Regulations.

## **2.10. International Obligations**

2.10.1 The Authorisation Holder shall comply with such Regulations of the ITU as the Commission may adopt from time to time and shall observe such international obligations that may be applicable to the Virgin Islands.

## **2.11. Termination and Suspension**

2.11.1 This Frequency Authorisation may be terminated or suspended in accordance with the terms of this Frequency Authorisation or the Act.

## **2.12. Service of Notices**

2.12.1 Any notice required to be given by the Commission to the Authorisation Holder under this Frequency Authorisation shall be in writing and shall be deemed to have been given if sent by post or hand delivered to the Authorisation Holder's address in the Territory, as indicated in the Authorisation Holder's application for a frequency authorisation or

any other address of which the Authorisation Holder might have provided notice to the Commission from time to time.

- 2.12.2 Any notice required to be given by the Authorisation Holder to the Commission under this Frequency Authorisation shall be in writing and shall be deemed to have been given if sent by post or hand delivered to the Commission's principal place of business in the Territory.

### **2.13. Applicable Law and Severance**

- 2.13.1 This Frequency Authorisation shall in all respects be governed by, construed, and take effect in accordance with the Laws of the Virgin Islands.
- 2.13.2 The terms of this Frequency Authorisation are severable and if any term or identifiable part thereof is held to be invalid or unenforceable by any court of competent jurisdiction then such invalidity or unenforceability shall not affect the validity or enforceability of the remaining provisions or sub-provisions or identifiable parts thereof.

## **3. Conditions Specific to the Use of the Assigned Frequency Bands**

### **3.1. Use of Spectrum**

- 3.1.1 The Authorisation Holder shall use the assigned frequency band for the delivery of IMT services within the Territory of the Virgin Islands to the extent as may be technically possible without causing harmful interference to the telecommunications network of another operator nor to telecommunications networks in neighbouring countries. The Authorisation Holder shall not use the assigned frequency band for any other purpose without the prior written approval of the Commission and in any event shall not use the assigned frequency band for any purpose other than to operate a telecommunications network and or to provide a IMT service in the Territory of the Virgin Islands.
- 3.1.2 The Authorisation Holder shall comply with the terms and conditions of this Frequency Authorisation and the Schedules hereto which include agreed Minimum Service Requirements, a Cell Site Information Plan and a Business Continuity Plan including a Disaster Recovery Plan aligned with ISO 22301 or equivalent international standards.
- 3.1.3 The Authorisation Holder shall ensure that IMT services are provided within the Territory of the Virgin Islands to at least the Minimum Service Requirements defined in Schedule B, using the cell sites and their technical characteristics defined in the Cell Site Information Plan in Schedule C, and the Business Continuity Plan defined in Schedule E.
- 3.1.4 The Authorisation Holder shall ensure that its use of the assigned frequency band does not cause harmful interference to any other authorised user of the spectrum unless and to the extent provided for under the Act, in accordance with Regulations or with the Telecommunications Code and or in accordance with international recommendations and standards recognised by the ITU.
- 3.1.5 The Authorisation Holder shall ensure that its use of the assigned frequency band does not cause danger to the public.
- 3.1.6 The Authorisation Holder shall, when using the assigned frequency band, take proper and adequate measures to safeguard life, property and the environment,

including safeguarding against exposure to any electrical or radiation hazard emanating from any equipment used by the Authorisation Holder.

- 3.1.7 The Authorisation Holder shall ensure that any radio communications service or radio transmitting equipment operated on the assigned frequency band or otherwise with the use of the spectrum is in compliance with such emission standards and technical specifications that may be published by the Commission from time to time.
- 3.1.8 The Authorisation Holder shall, in accordance with instructions issued by the Commission from time to time, co-operate with the Commission in its co-ordination and management of the efficient use of the spectrum as a public resource and shall provide any assistance reasonably requested by the Commission for this purpose. Such assistance shall include realignment of authorised spectrum within a frequency band for the purpose of ensuring contiguous spectrum for all Authorisation Holders using that frequency band.
- 3.1.9 Subject to Article 3.2 below, the Authorisation Holder shall, in accordance with the Act and with any other applicable law, obtain all required approvals and rights of access for access to lands and or for the construction or erection of the facilities or of any equipment or other installation in relation to the use of the assigned frequency band.
- 3.1.10 The Authorisation Holder shall retain accurate and up-to-date detailed records of the operation of a telecommunications network or the provision of a telecommunications service on the assigned frequency band and shall make such information available to the Commission promptly upon request and without charge to the Commission in accordance with the Act.
- 3.1.11 Without prejudice to the provisions of the Act, the Authorisation Holder shall allow the Commission upon receiving reasonable prior notice to inspect the facilities, inclusive of the Authorisation Holder's equipment and shall provide any related assistance to satisfy the Commission that the Authorisation Holder is in compliance with the terms and conditions of this Frequency Authorisation.
- 3.1.12 The Authorisation Holder shall not significantly change the location or any technical parameter of any transmitter used on the assigned frequency band without the prior approval of the Commission.

## **3.2. Construction of Sites**

- 3.2.1 The Authorisation Holder shall ensure that the facilities:
- 3.2.1.1. are used, to the maximum possible extent, on a shared basis with other users of the spectrum, licensees and public utilities. To the extent that it is not considered feasible to use the existing facilities and utility installations, the Authorisation Holder shall submit such proof to the Commission as the Commission considers appropriate;
  - 3.2.1.2. are designed and constructed in such a way that they blend in with the surrounding physical environment to the maximum possible extent and to the satisfaction of the Commission.

- 3.2.1.3. are designed, constructed and maintained in such a way that they either can withstand a hurricane of Category 5, as defined by the Saffir–Simpson hurricane wind scale (SSHWS) or be restored as expeditiously as possible, after any hurricane has passed the Territory.
- 3.2.2 Except where the Commission exempts a specific type of facility from the requirements of Article 3.2.1 above, the Authorisation Holder, shall satisfy the Commission that the facilities, inclusive of the equipment hosted therein will comply with such requirements.
- 3.2.3 The Commission may recommend changes to the design, structure or any other aspect of the facilities to ensure that the Authorisation Holder complies with the requirements of Article 3.2.1.1, 3.2.1.2 and 3.2.1.3.

### **3.3. Maintenance of Technical Records**

- 3.3.1 The Authorisation Holder shall maintain accurate, up to date and detailed technical data in relation to the use of the assigned frequency band authorised by this Frequency Authorisation as per the Cell Site Information Plan of Schedule C. This needs to be consistent with, amongst others, the following:
  - 3.3.1.1. The exclusion zone around the site, calculated by the Authorisation Holder using recognized international standards such as IEC 62232, IEC 62669 and IEC 62311 or equivalent ITU standards and the ICNIRP (2020) guidelines, the protective measures taken to ensure that members of the general public cannot enter the exclusion zone as well as the underlying assumptions and calculations
  - 3.3.1.2. The ITU emission designation.
- 3.3.2 The Authorisation Holder shall, subject to section 70 of the Act, provide the Commission with the records referred to in 3.3.1 within six (6) months of the Date of Issue and thereafter on the anniversary of the Date of Issue and/or upon request by the Commission, in such form as might be specified by the Commission from time to time.
- 3.3.3 The Authorisation Holder shall notify the Commission of any proposed material changes to its radio communication service, radio transmitting equipment and facilities, and shall provide the Commission with such information as the Commission shall reasonably require for the purpose of assessing the effect of such changes.

### **3.4. Enforcement**

- 3.4.1 The Commission may take such enforcement action against the Authorisation Holder as it considers appropriate and or suspend or terminate this Frequency Authorisation in accordance with the Act.

By:  
**GUY LESTER MALONE**  
Chief Executive Officer



For and on behalf of:  
**THE TELECOMMUNICATIONS  
REGULATORY COMMISSION**

By:

**[NAME]**

**[title]**

For and on behalf of:

**[COMPANY]**

## SCHEDULE A

### The Assigned Frequency Bands

The Commission hereby assigns to the Authorisation Holder the following frequency bands for the operation of a telecommunications network and the provision of telecommunications services subject to the terms and conditions of this Frequency Authorisation:

Band	Uplink frequency range		Downlink frequency range	
	Lower bound	Upper bound	Lower bound	Upper bound
850 MHz	XXX MHz	XXX MHz	XXX MHz	XXX MHz
900 MHz	XXX MHz	XXX MHz	XXX MHz	XXX MHz
1800 MHz	XXX MHz	XXX MHz	XXX MHz	XXX MHz
1900 MHz	XXX MHz	XXX MHz	XXX MHz	XXX MHz
2500 MHz	XXX MHz	XXX MHz	XXX MHz	XXX MHz

The total frequency spectrum assigned under this Frequency Authorisation is XXX MHz.

## **SCHEDULE B**

### **Minimum Service Requirements**

The Authorisation Holder shall provide services in the Virgin Islands using frequencies within the frequency range defined in Schedule A and shall ensure that the following minimum service requirements are attained:

1. The minimum service requirements defined in this Schedule shall be met using the frequency bands specified in Schedule A.
2. The Authorisation Holder shall provide, and thereafter maintain, a telecommunications network that is capable of providing at 95% of locations within any area of 100m by 100m a IMT service to users, when that network is lightly loaded, with the service requirements according to the following time schedule:
  - a) Within 12 months of the Date of Issue:
    - i. A minimum downlink speed of not less than 30 Megabits per second and a minimum uplink speed of 8 Megabits per second:
    - ii. To at least 98% of the population of each of the islands of Tortola, Anegada, Jost Van Dyke and Virgin Gorda
    - iii. A round-trip latency of 30 milliseconds
    - iv. A maximum package loss of 1%.
    - v. A Fault Recovery Rate, as defined in the unitary licence of 90% within 24 hours and of 95% within 72 hours for every day of the year during the term of the Frequency Authorisation.
  - b) Every subsequent 12 month period:
    - i. A minimum downlink speed, uplink speed and round-trip latency of not less than the mean global downlink speed, uplink speed, and round-trip latency as published by the Commission at the start of the period, taking into account internationally recognized enterprises/organizations such as Ookla, Open Signal and/or the International Telecommunications Union (ITU).
    - ii. To at least 98% of the population of each of the islands of Tortola, Anegada, Jost Van Dyke and Virgin Gorda
    - iii. A maximum package loss of 1%.
    - iv. A Fault Recovery Rate, as defined in the unitary licence of 90% within 24 hours and of 95% within 72 hours for every day of the year during the term of the Frequency Authorisation.
3. For the purpose of the Minimum Service Requirements, a network is considered 'lightly loaded' if it has a single user demanding service within the serving cell, and the surrounding cells of the network are loaded to a light level (by which is meant the common channels only are transmitting at 22% of the maximum cell power).
4. The Commission may assess the Authorisation Holder's compliance with this Schedule by assessing the Cell Site Information Plan, the data on the quality of services collected by the Authorisation Holder as mentioned in section 2.4.2 above and by regular quality

of service and/or network audits which will be based on best international practices regarding such audits.

5. The Authorisation Holder shall deploy, and thereafter, maintain its network, incorporating at a minimum, the cell sites with the configuration defined in the Cell Site Information Plan of Schedule C.
6. In this Schedule:
  - a) “population” means persons resident in the Virgin Islands, including its territorial waters, who have access to a mobile telecommunications network.
  - b) “Cell Site Information Plan” means the document defined in Schedule C.

## SCHEDULE C

### Cell Site Information Plan

The Authorisation Holder shall deploy, and thereafter maintain, its network incorporating as a minimum the cell sites with the configuration defined in this Schedule.

The Authorisation Holder shall maintain accurate, up to date and detailed technical data in relation to the use of the assigned frequency band authorised by this Frequency Authorisation using the cell sites and their technical characteristics set out in Table C.1 and Table C.2 below.

The Authorisation Holder shall provide the Commission with the records referred to in this Schedule within six (6) months of the Date of Issue and on the anniversary of the Date of Issue thereafter and/or upon request by the Commission, in such form as might be specified by the Commission from time to time.

Any variations to the Cell Site Information Plan by the Authorisation Holder will need to be submitted in writing to the Commission within one (1) month of implementing the changes.

**Table C.1: General information per cell site**

#	Column Name(Field)	Description
1	Frequency Authorisation ID	ID for Authorisation Holder responsible for the site.
2	TRC Site ID	Unique code for the whole site, issued by the Commission
3	Name and contact details of the Site Compliance Manager	Name of the site compliance manager
4	MNO Site ID	Site code from the Authorisation Holder
5	Site Sharing	Whether this site infrastructure is shared or could be shared with other Authorisation Holders
6	Site Name	Site name
7	Site Address	Street address of the site
8	General Location	General Location where the site is located
9	Island	Name of the Island of the site
10	North Site Coordinate	North coordinate of the site, based on WGS84 and given in degrees with decimals (e. g. 18.436539)
11	East Site Coordinate	East coordinate of the site, based on WGS84 and given in degrees with decimals (e. g. -64.618103)

13	Installation Support Structure	This field contains either <i>tower</i> , <i>rooftop</i> , and others depending on the installation
14	Horizontal Compliance Distance	Horizontal compliance distance for the site as calculated by the Authorisation Holder (in m)
15	Vertical Compliance Distance	Vertical compliance distance for the site as calculated by the Authorisation Holder (in m)

**Table C.2 Detailed information per cell site**

#	Column Name (Field)	Description
1	Sector IDs	ID for Sectors
2	IMT Generation	IMT technology according to its generation: <b>2G</b> , <b>3G</b> , <b>4G</b> or <b>5G</b>
3	Spectrum Usage Techniques	Spectrum Usage Duplex Techniques (FDD or TDD)
4	Frequency [MHz]	The lowest frequency of the IMT (downlink) band used, in MHz (e.g. 925)
5	Antenna Type	Antenna type;
6	Antenna Make	Antenna make;
7	Antenna Model	Ideally, specify the exact model of the antenna. At minimum state directional or omnidirectional. Also Massive MIMO or beamforming etc...
8	Main Beam Direction [°]	Azimuth direction (main beam with respect to true north); In case a directional antenna is used, state the physical direction versus North of the sector antenna.
9	Electrical Down Tilt Range [°]	Electrical (degrees); In case of passive antenna, state physical down tilt, in case of active antenna array, state maximum down tilt of traffic beam
10	Mechanical Down Tilt Range [°]	Mechanical tilt (degrees); In case of passive antenna, state physical down tilt, in case of active antenna array, state maximum down tilt of traffic beam
11	Antenna Gain [dBi]	In case of passive antenna, state nominal gain in horizontal direction, in case of the active antenna array state maximum horizontal gain

12	Side lobe attenuation [dB]	Gain reduction of the antenna 90° from the main lobe in vertical direction, in dB (e.g. 15)
13	Total transmitter power [W]	Total transmitter RF power per antenna port or in case of a single transmitting system consisting of a combination of multiple integrated transmitters the total RF power of all these transmitters;
14	Max. E.I.R.P. [W]	Maximum equivalent radiated power in the main direction of the antenna over the whole signal bandwidth (not per subcarrier), relative to an isotropic antenna, in dBi
15	Antenna Height	Height of the antenna of this IMT system on a mast above ground level, in m

## SCHEDULE D

### Penalties

After the initial 12 months of the Date of Issue until the Expiry Date of the Frequency Authorisation, the Commission will conduct quarterly quality of service measurements, in line with the quality of service measurements set out in Schedule B.

The penalties in case of non-compliance with the quality of service requirements as stated in Schedule B are as follows:

#### Within 12 months of the Date of Issue:

Quality of service parameter	Target	Result	Penalty	Remarks
DL/UL in Mbps	30 /8	> 95% of measurements	\$4,000	For each 1 percent points below target
Latency in msec	<30 msec	> 95% of measurements	\$1,000	For each 1 percent points below target
Packet loss	< 1%	> 95% of measurements	\$1,000	For each 1 percent points below target
Fault recovery rate 24 hours	90%	> 90% of failures	\$1,000	For each 1 percent points below target
Fault recovery rate 72 hours	95%	> 95% of failures	\$1,000	For each 1 percent points below target

#### Every subsequent 12 month period:

Quality of service parameter	Target	Result	Penalty	Remarks
DL/UL in Mbps	TBD*	> 95% of measurements	\$4,000	For each 1 percent points below target
Latency in msec	TBD*	> 95% of measurements	\$1,000	For each 1 percent points below target
Packet loss	TBD*	> 95% of measurements	\$1,000	For each 1 percent points below target
Fault recovery rate 24 hours	90%	> 90% of failures	\$1,000	For each 1 percent points below target
Fault recovery rate 72 hours	95%	> 95% of failures	\$1,000	For each 1 percent points below target



In this Schedule, '*TBD*' shall refer to such targets that the Commission may determine as appropriate and publish on its website within 30 calendar days of the anniversary date of the Date of Issue, taking into account internationally recognized enterprises/organizations such as Ookla, Open Signal and/or the International Telecommunications Union (ITU).

## **SCHEDULE E**

### **Business Continuity Plan**

The Authorisation Holder shall draft a Business Continuity Plan (BCP) that complies with section 3.1.2 and adhere to its commitments in its Business Continuity Plan as stated below.

[The BCP submitted by the licensee will be incorporated here]