

## Memorandum of Understanding

This Memorandum of Understanding ("MOU") dated the \_\_\_\_ day of \_\_\_\_\_, 2011

**BETWEEN the Parties listed in Annex 1A**

### 1. General

1. The Grenada Internet Exchange ("**GREX**") is a member-owned organization which facilitates the interconnection of the networks of Internet Service Providers ("**ISPs**") within Grenada, and hence improves connectivity and service for their customers nationally and internationally.
2. The **GREX** manages a physical point of interconnection (the "**Facility**"). Members may connect to each other's networks by connecting their router to the Facility. The **GREX** is not an ISP and is not intended for the sale of Internet connectivity.
3. Members are required to enter into separate peering agreements with all other Members before they can exchange traffic, even if they are connected to the **GREX** Facility.

### 2. Membership

1. All persons licensed by the Grenada National Telecommunications Regulatory Commission ("NTRC") to provide Internet access services or to operate Internet networks, and who comply with the requirements of this MOU, are eligible for membership in the **GREX** (the "**Members**").
2. All Members are required at all times to adhere to both the Organisational Requirements and Technical Requirements of **GREX**, as set out in Annex 2 (collectively, the "**Requirements**"). The Committee may amend the Requirements below from time to time and will publish these changes on the **GREX** web site if applicable, or circulate via email among the Members. Members agree to comply with any amendments within thirty (30) days.
3. A prospective Member must submit an application for membership including any information required to demonstrate they meet the Requirements.
4. Prior to their membership application being approved, new Members must demonstrate, to the satisfaction of the Committee, that they will be able to meet the Requirements. Members who cease to meet any of these Requirements subsequent to joining may lose their membership, subject to the terms of this MOU.
5. Connection to the **GREX** facilities may only proceed after the **GREX** has approved the membership application and after the new Member has signed the MOU.

### 3. Associate Members

1. Persons who do not meet the membership requirements can still be involved with **GREX** by becoming an Associate Member. Associate Members benefit from being part of this community by having access to **GREX** Member meetings, and email communications. However, they do not have a right to vote at meetings and do not share in the costs of the **GREX**.

#### 4. Structure of GREX

1. The **GREX** is a not-for-profit voluntary association of ISPs in Grenada. Each full Member shall have a number of votes equal to that Member's share of the costs of the **GREX** (e.g., if all Members share the costs equally, each Member will have one vote)
2. The **GREX** is managed by the Committee, which comprises of full Members of the **GREX**. Each Member shall be entitled to vote all of their votes, as described above. Only votes of Members present at meetings of the Committee shall be considered. Votes shall be cast in real-time, in person or by telepresence, at the annual or any other meeting of the **GREX** membership. In the absence of a consensus, majority voting shall apply (with the exception of decisions to purchase new equipment for the Facility, to incorporate the **GREX**, or to change the organisational structure of the **GREX** or Committee, in which case unanimity shall be required).
3. A meeting of the Committee shall have a quorum if the Members received at least two (2) weeks' notice of the meeting (although Members may waive this requirement in writing) and at least two or half of the Members (which ever is greater) are present.
4. All Members' votes, as well as all business of the meeting, shall be recorded in minutes, which shall be made publicly available on the **GREX** web site.

#### 5. Cost Recovery

1. The costs associated with the operation of the **GREX** and of the **GREX** Facility will be recovered from the Members on an equitable, shared basis. At the present time, each Member shall bear an equal share of the costs.
2. New Members will pay the appropriate set-up and annual fees, as determined from time to time by the Committee and published in the schedule of membership fees in Annex 3. New Members joining during the year will pay fees prorated to the beginning of the month in which they join.
3. Existing Members will pay the agreed annual fees for that year within thirty (30) days of the due date. The fees will be reviewed at least once a year by the Committee so as to cover the projected costs of the upcoming year, including the costs of upgrading the Facility, as required.
4. The fees paid by a Member will provide for equipment rack space not larger than 3U (approximately 13.5cm) in an 800d x 600w data cabinet. Port connectivity will be charged at the appropriate connection rate as published in the **GREX** schedule of membership fees. If a Member requires additional services from **GREX** these may be charged for separately, by agreement.
5. Members are responsible for the costs of their own connection to the Facility.

#### 6. Voluntary Termination of Membership

1. A Member shall have the right to terminate its membership in the **GREX** for any reason and at any time upon seven (7) days' prior written notice to the **GREX** and to all other Members.
2. Voluntary termination of membership does not affect the former Member's obligation to pay fees prior to the date of termination, and the other Members are not responsible for the consequences of the terminating Member's decision.

## 7. Sanctions for Non Compliance

1. Failure of a Member to comply with either the Organisational or the Technical Requirements may result in sanction being taken against such Member. Such sanction shall be discussed with the other Members and the Committee before being imposed, and may, depending on the severity of the incident, take the form of any or all of:
  - 1.1. Immediate disconnection from the Facility pending resolution of the non-compliance by the Member :
  - 1.2. Suspension of member with a view to Termination. This shall have the following effects:
    - 1.2.1. Suspension shall be immediately announced to all the Members and to the NTRC
    - 1.2.2. The NTRC shall be notified of the suspension.
    - 1.2.3. The Member shall be disconnected from the Facility while suspended.
    - 1.2.4. The member shall not be entitled to vote or to make use of any other right with the exceptions:
    - 1.2.5. The Member may attend the General Meetings of the **GREX**;
    - 1.2.6. The Member may appeal a decision to suspend or terminate its membership of the Committee to the NTRC.
    - 1.2.7. The remaining Members are not liable for the consequences of the suspension or termination of a Member for non-compliance with this MOU.

## 8. General

1. The governing law for **GREX** and this MOU is that of Grenada.

[signature page follows]

**AGREED** by the Parties on the dates listed below:

SIGNED by: **Cable & Wireless Grenada Limited**

**Columbus Communications (Grenada) Limited**

Name:

\_\_\_\_\_

\_\_\_\_\_

Title:

Date:

SIGNED by:

Name:

\_\_\_\_\_

\_\_\_\_\_

Title:

Date:

**Annex 1A**

**GREX Members**

Cable & Wireless Grenada Limited

The Carenage  
St. George's  
Grenada

Columbus Communications (Grenada) Limited

Lucas Street  
St. George's  
Grenada

(effective \_\_\_\_ day of \_\_\_\_\_, 2011)

**Annex 1B**

## **GREX Associate Members Annex 2**

### **Organisational and Technical Requirements**

#### **Organisational Requirements**

1. Members shall be licensed by the NTRC to provide Internet access service or operate an Internet network.
2. Members must have their own permanent connection to the Internet, separate from any GREX connection.
3. Each Member will provide their contact details for operation matters, and contact details of the person or persons to whom requests for peering should be sent.
4. An appropriate level of insurance is recommended but not required relating to equipment located at GREX. Members will not hold GREX liable for any loss, claims or damage whatsoever resulting from the activities of another Member at the Facility.
5. Members must pay all fees due within thirty (30) days of the due date. In the event that membership is suspended or terminated for non-payment, subject to the discretion of the Committee, and a re-connection fee may apply.
6. Members must not carry out any illegal activities through GREX.

#### **Technical Requirements**

1. General
  - a. Members must ensure that their usage of GREX is not detrimental to the usage of GREX by other Members. Members must also ensure that their usage is in compliance with applicable Internet standards as published by the IETF and as documented in the current version of STD 1.
  - b. Members shall not use the GREX for transiting of traffic.
  - c. Traffic may only be forwarded from one GREX Member to another (peering) if permission has been given by the recipient. Peering is mandatory between Members.
2. Connectivity
  - a. GREX provides connectivity to its infrastructure using a switch. The following requirements apply:
    - i. Single mode, single-strand Gigabit Ethernet fibre connectivity terminating on a Gigabit Ethernet Small Form-factor Pluggable (SFP) 1310/1550nm (D/U) optic
    - ii. Support for IPv4 and BGP-4 mandatory, with IPv6 and BGP-4 RFC 4760 (multi-protocol support) support preferred

- b. GREX reserves the right to disconnect any port which violates any of the requirements listed in section 2a

### 3. Policy Routing

- a. Each Member must have their own Autonomous System number, and register the routing policy for their AS in the RIPE routing registry or another public routing registry.
- b. Unicast peering between Members' routers across GREX will be via BGP (version 4 or subsequent).

### 4. Physical

- a. Any equipment installed by a Member at GREX must be clearly labeled as belonging to the Member. Members must notify GREX of equipment details and insurance values prior to installing or changing any equipment.
- b. Members must not interfere with equipment owned by others installed at GREX or in the room or cage containing GREX without the explicit permission of the owner.
- c. Members have a duty of confidentiality to GREX and other GREX Members.
- d. Members may not directly connect customers to their router housed in any GREX rack.
- e. Members may not connect equipment to or otherwise provide connectivity to GREX switch infrastructure on behalf of non-Members.
- f. Members may access the premises at which the GREX for routine purposes during normal business hours upon not less than twenty-four hours notice to the site owner. In the event of an emergency, Members will endeavour to give as much notice as is reasonable in the circumstances.



**Annex 3**  
**Schedule of Fees**