

ITU-D Study Group workshop session “Meaningful Connectivity Projects and Impact”

Emergency Telecommunications WINLINK Network
Caribbean Countries

8th May 2023

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ITU IN BRIEF

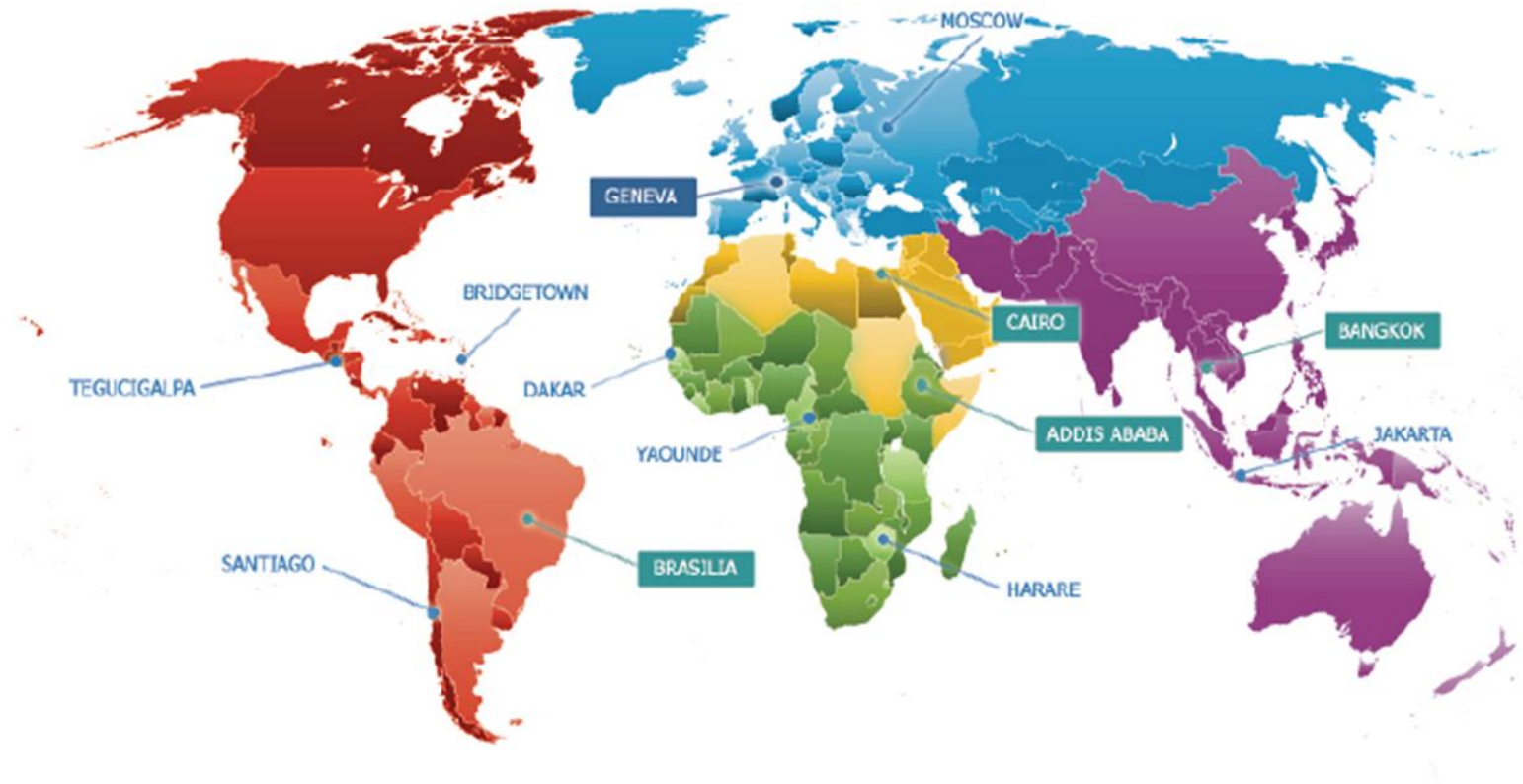
- Founded in 1865
- Leading United Nations Agency for ICTs.
- 193 Member States, 700 + Sector Members & Associates, 130 + Academia
- Over 750 Employees from more than 80 nationalities
- Three sectors:
 - **Radiocommunication**
 - **Standardization**
 - **Development**
- ITU TELECOM Events



ITU Elected Officials

*Top L-R : Dir. ITU Sec. Gen. Doreen Bogdan; Dep. Sec. Gen. Tomas Lamanauskas;
Below L-R : Dir. Mario Maniewicz (BR); Dir. Seizo Onoe (TSB); Dir. Dr. Cosmas Zavazava (BDT)*

ITU's GLOBAL PRESENCE



5 regional offices, 8 area offices
HQ in Geneva, Switzerland

*ITU is committed to connecting all the world's people – wherever they live and whatever their means.
Through our work, we protect and support everyone's right to communicate.*

WHY EMERGENCY TELECOMMUNICATIONS

- ❖ Alert the population before, during and after the disaster
- ❖ Convey necessary information for important decision-making during all the phases of a disaster
- ❖ The coordination during the interventions between the different actors, entities.

Saving Lives

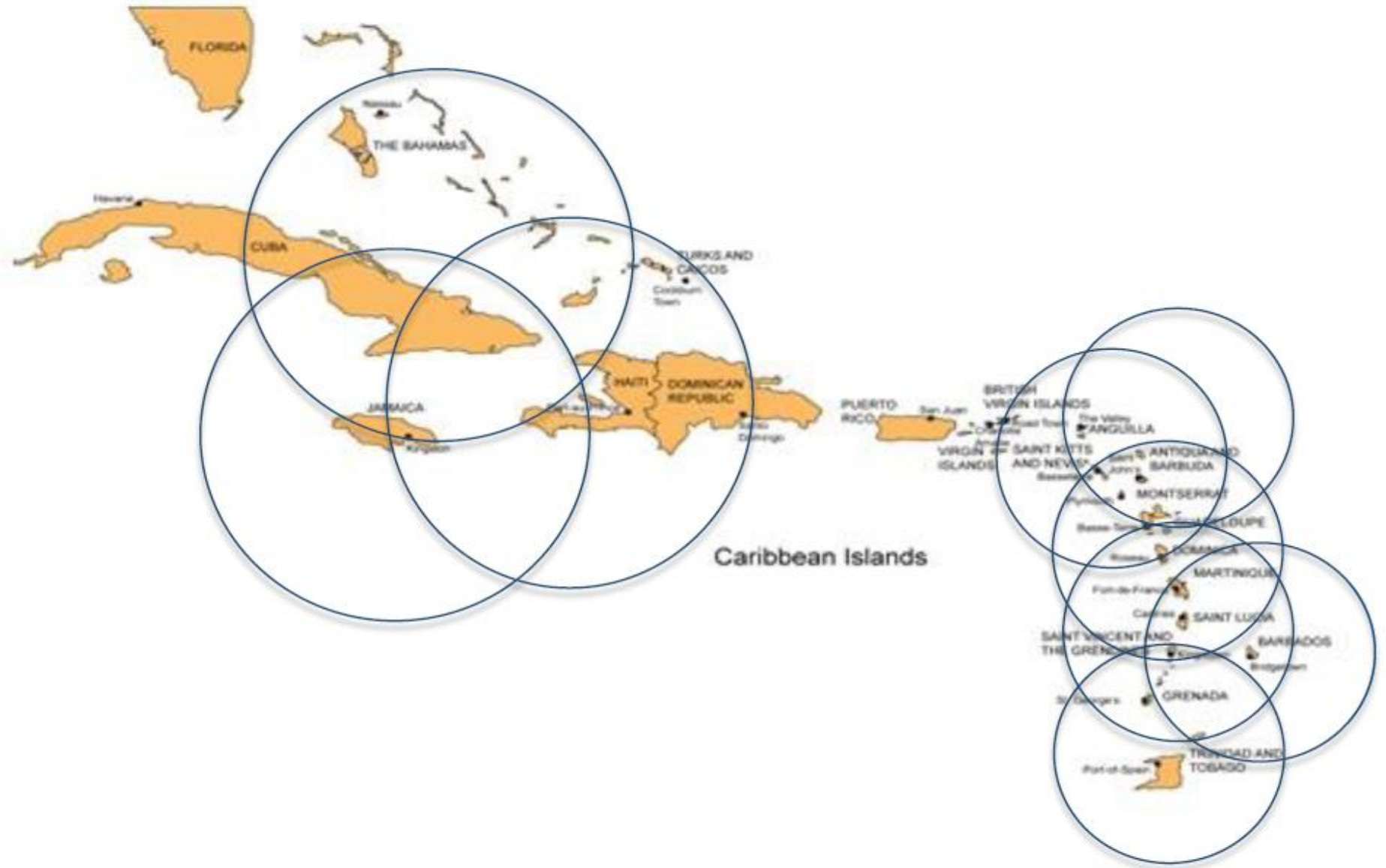
ITU & EMERGENCY TELECOMMUNICATIONS

Our work can be summed up in four principles:

- ❖ **Multi-hazard:** providing the necessary medium and link to mitigate disasters irrespective of their nature.
- ❖ **Multi-technology:** promoting the use of any form and means of telecommunications that can contribute to universal access or access by the majority of the people.
- ❖ **Multi-phased:** ICTs are critical at all stages of disaster management and also are essential in reducing vulnerability of people.
- ❖ **Multi-stakeholder:** communicating rural and local communities, the central government, the private sector, civil society and International Organizations, among others.

WINLINK EMERGENCY TELECOMMUNICATIONS NETWORK for THE CARIBBEAN

The solution consists of implementing a Regional Emergency Telecommunications Network in beneficiary countries, providing the Emergency Operations Centers (EOC) of ITU Member States with the necessary equipment (RMS server and client function) to connect to the network Winlink 2000, under the characteristics of redundancy and autonomy.



Caribbean Islands

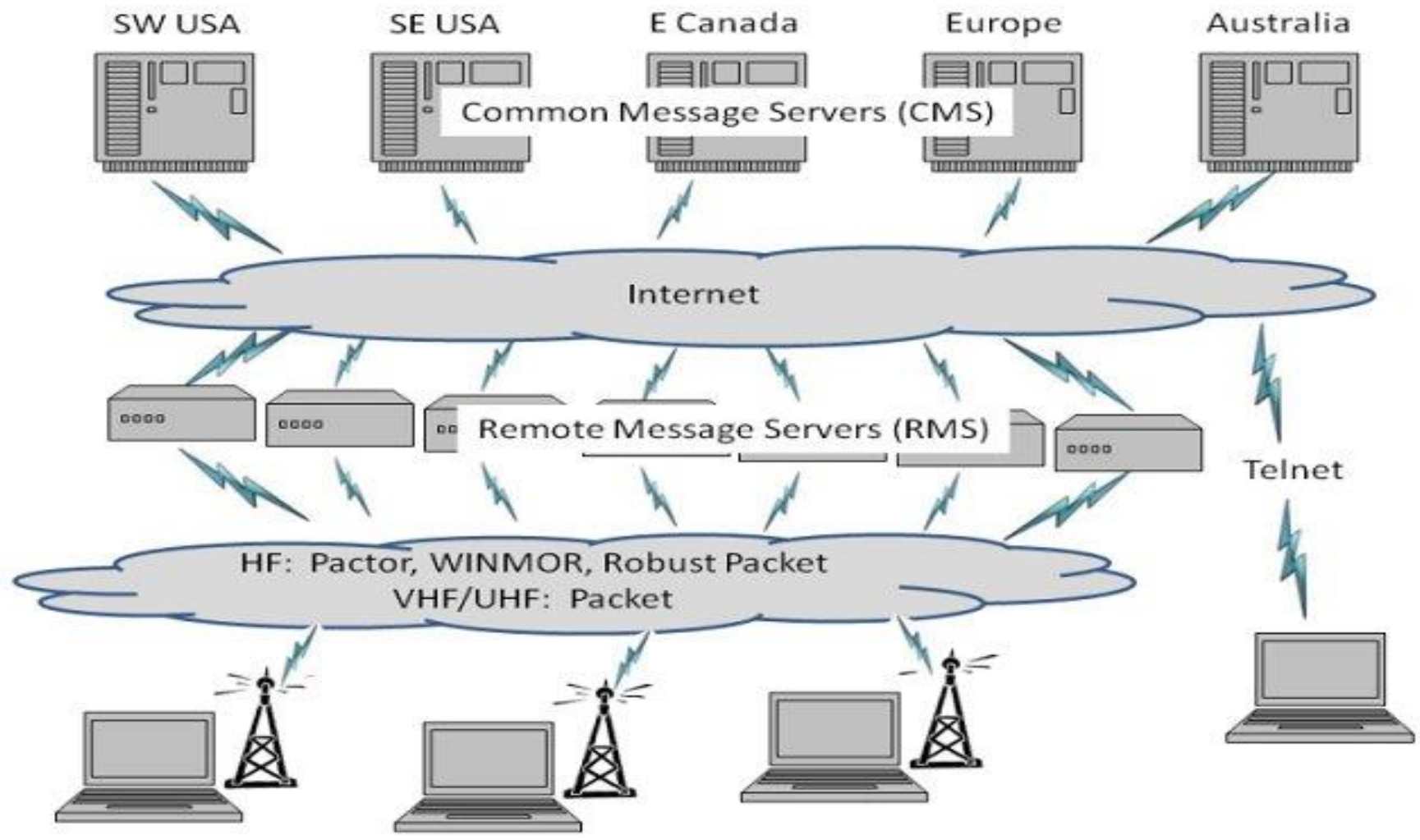
1. What is WINLINK 2000

- ❖ WINLINK 2000 is a worldwide system for sending and receiving e-mail via the radio.
- ❖ Since the connection from the client computer to the WINLINK server does not depend on the Internet, WINLINK is widely used by relief groups including International Red Cross.

2. How does it work

- ❖ The WINLINK system consists of a group of common message servers (CMS) placed in various places around the world. These servers connect over the Internet to radio message servers (RMS) in many geographic locations to form a star network configuration.
- ❖ The radio message servers are the VHF, UHF or HF RF gateways in the WINLINK system. The final component is the client computer (that is, a computer) that runs software to send / receive messages through radio.
- ❖ Like regular mail, WINLINK messages are sent to a specific address and may contain attachments such as images, weather maps, spreadsheets, ICS forms, etc. Emails can be sent between normal Winlink and SMTP / POP3 stations. Email servers like gmail.com.

3. Diagram of the network



Advantages of WINLINK

Winlink's ability to transfer messages between the system with different capabilities (VHF / UHF, HF and standard email) greatly increases interoperability in an emergency system. It identifies the location of users.

In addition, since Winlink is a storage and shipping system, **the stations do not have to make simultaneous connections**; this eliminates the time constraints on communication.

It is also possible to establish direct peer-to-peer connections between two client computers (radio stations) that are within the range of radio propagation without going through an RMS.

Emails sent through Winlink must follow the usual rules for amateur radio communication, therefore, they cannot be used for commercial operations.

In a given case that the place where the server is installed for various reasons does not have access to the internet, it has the ability to forward the message that it has received automatically, via radio to a range of 1500 to 2000 km (under optimal conditions) until it finds the server which has access to the internet, so that the latter provides it to the end user.

Observations and Lessons Learnt

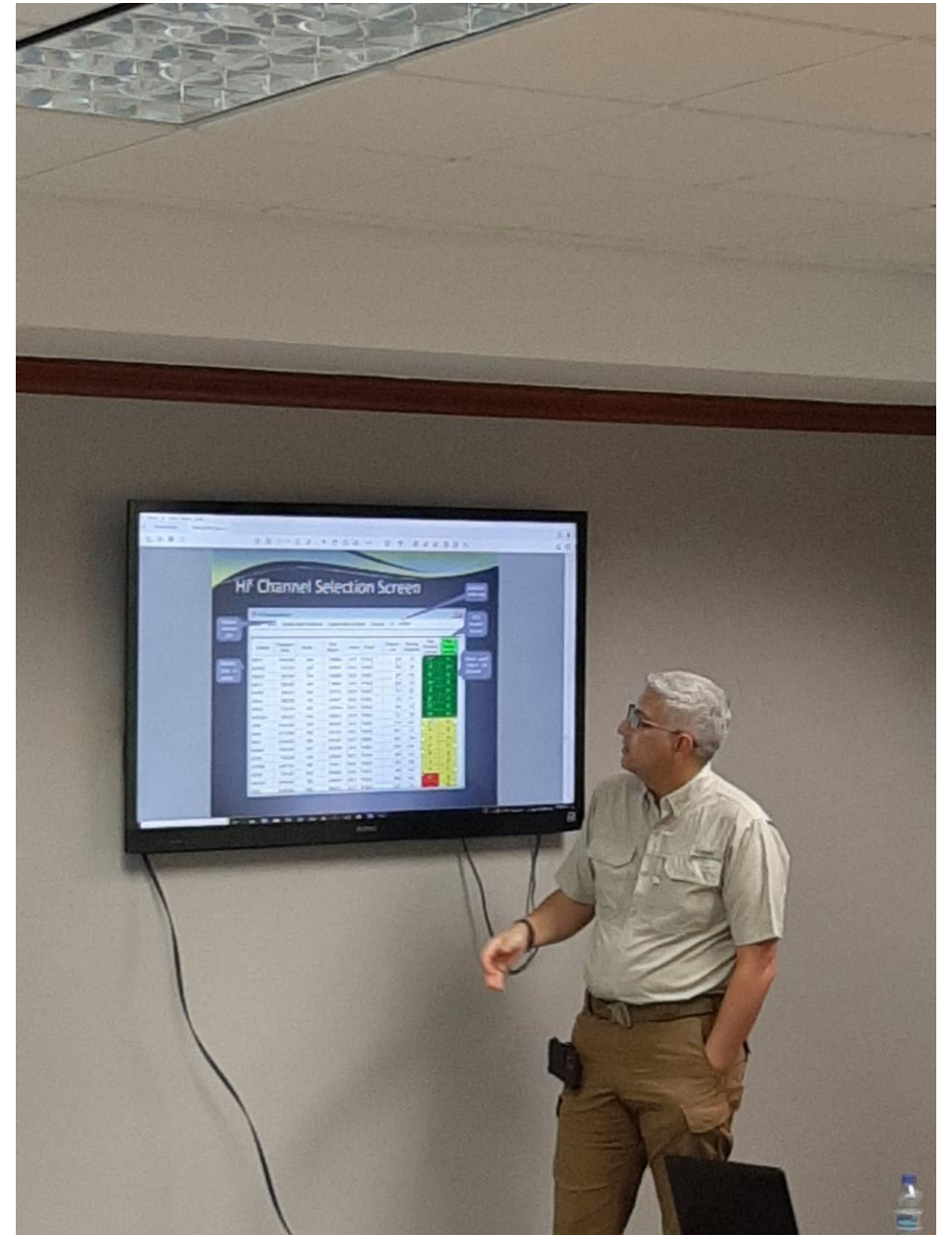
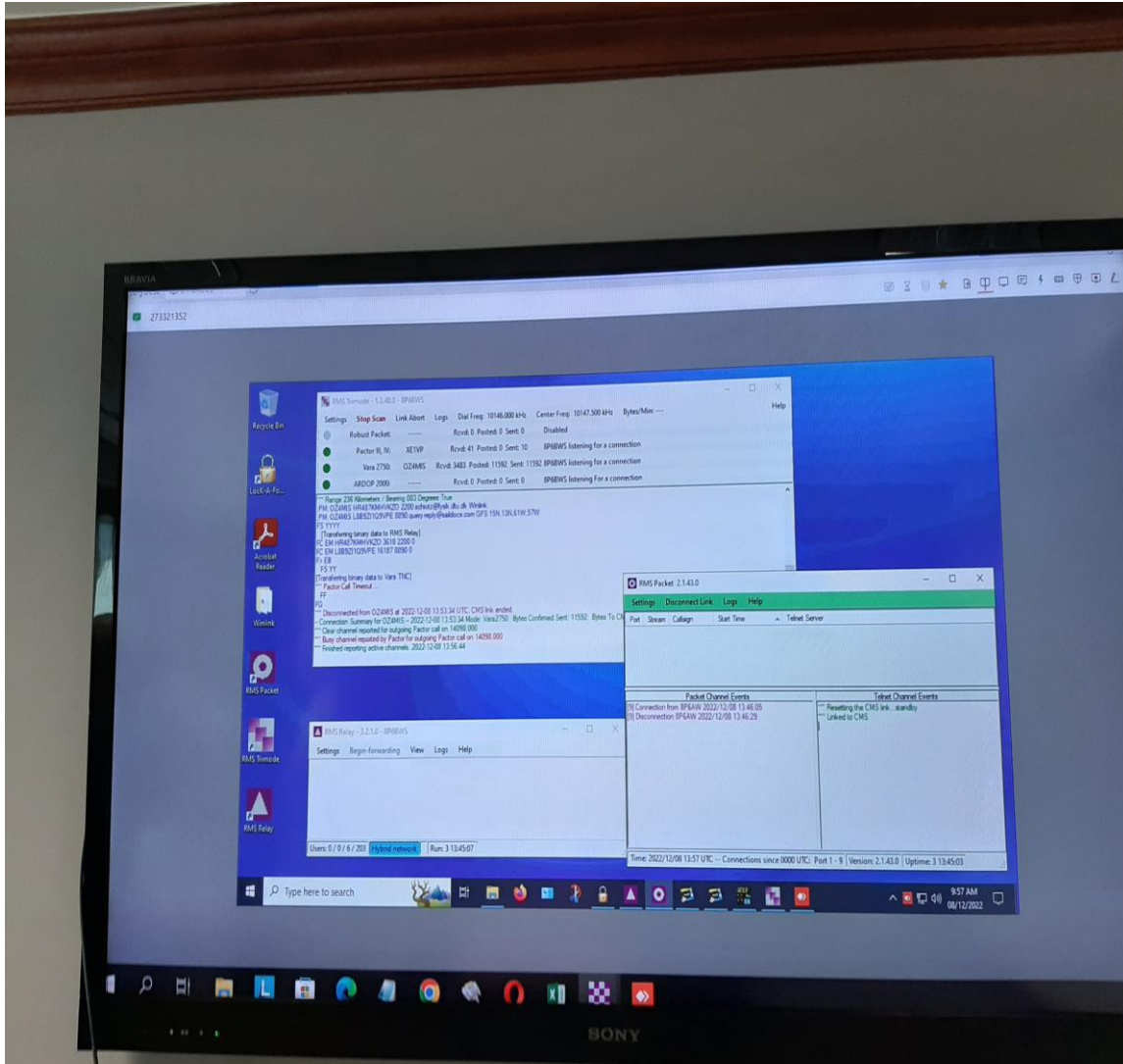
- ❖ There is a dearth of expertise related to installation and deployment of WINLINK Radio communications equipment or system of similar nature
- ❖ There is a need for additional training on the WINLINK System if the Network is to function efficiently and effectively 24/7
- ❖ It is preferable to be Physically present to do the installations than to do the Online Modality of installation which was used for Dominica and Barbados due to their in-country capacity and expertise. ***It should be noted that the Online Modality of Installation was resorted to due to restrictions on travel due to COVID-19 Pandemic in 2020/2021/2022.***

Observations and Lessons Learnt

- ❖ Some countries have starkly varying capacities and capabilities for deploying WINLINK and other related Radio Communications Equipment. Dominica and Barbados seem to have well- rounded cadre of competent Radio equipment installers. St. Kitts & Nevis and Antigua & Barbuda to a far lesser extent. It underscores the need for training.
- ❖ For future project of similar nature, it is preferable to undertake all training with personnel in the recipient country prior to the installation of the equipment.



WINLINK Training





Thank You

Q & A

<https://www.itu.int/en/Pages/default.aspx>