

Agenda

1. Implementation Status of C@ribNET
2. The Context of C@ribNET connectivity
3. National Research and Education Network (NREN)
4. Benefits and Applications
5. Enabling conditions for success

Caribbean Knowledge and Learning Network (CKLN)

CKLN is an Intergovernmental Agency of CARICOM,
established and funded by the governments of the
Caribbean:

Strategic Objective

To enhance global competitiveness of the Region by ***upgrading***
and ***diversifying*** the ***skills and knowledge*** of human resources
in the region through greater ***regional collaboration*** and
connectivity.

C@ribNET

What is it?

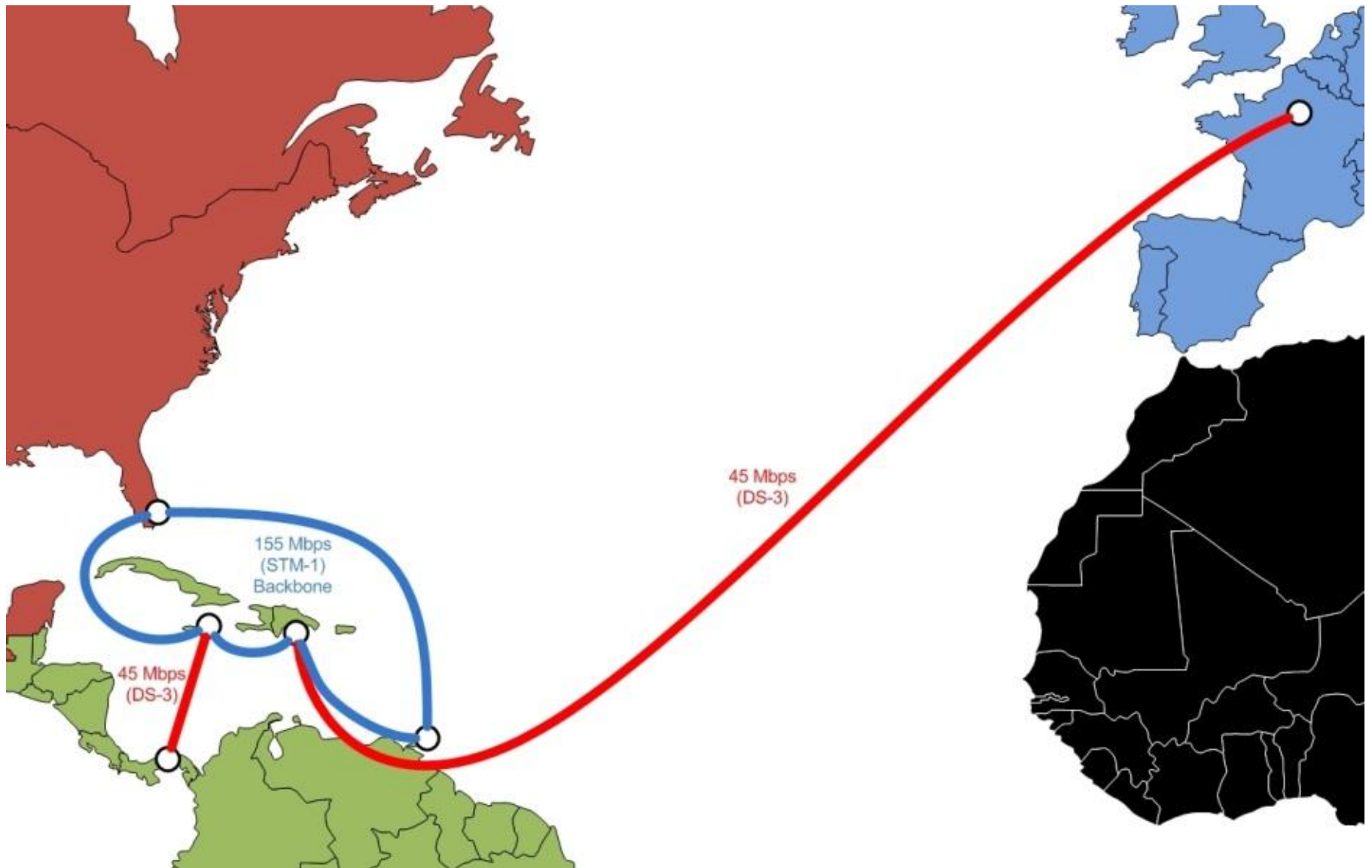
A regional broadband Knowledge and Learning Network, connecting education, knowledge and research centres, Health and regional public institutions in Caribbean countries together and then to the rest of the world's

(10 Million Euros Grant, Funded by the EU)

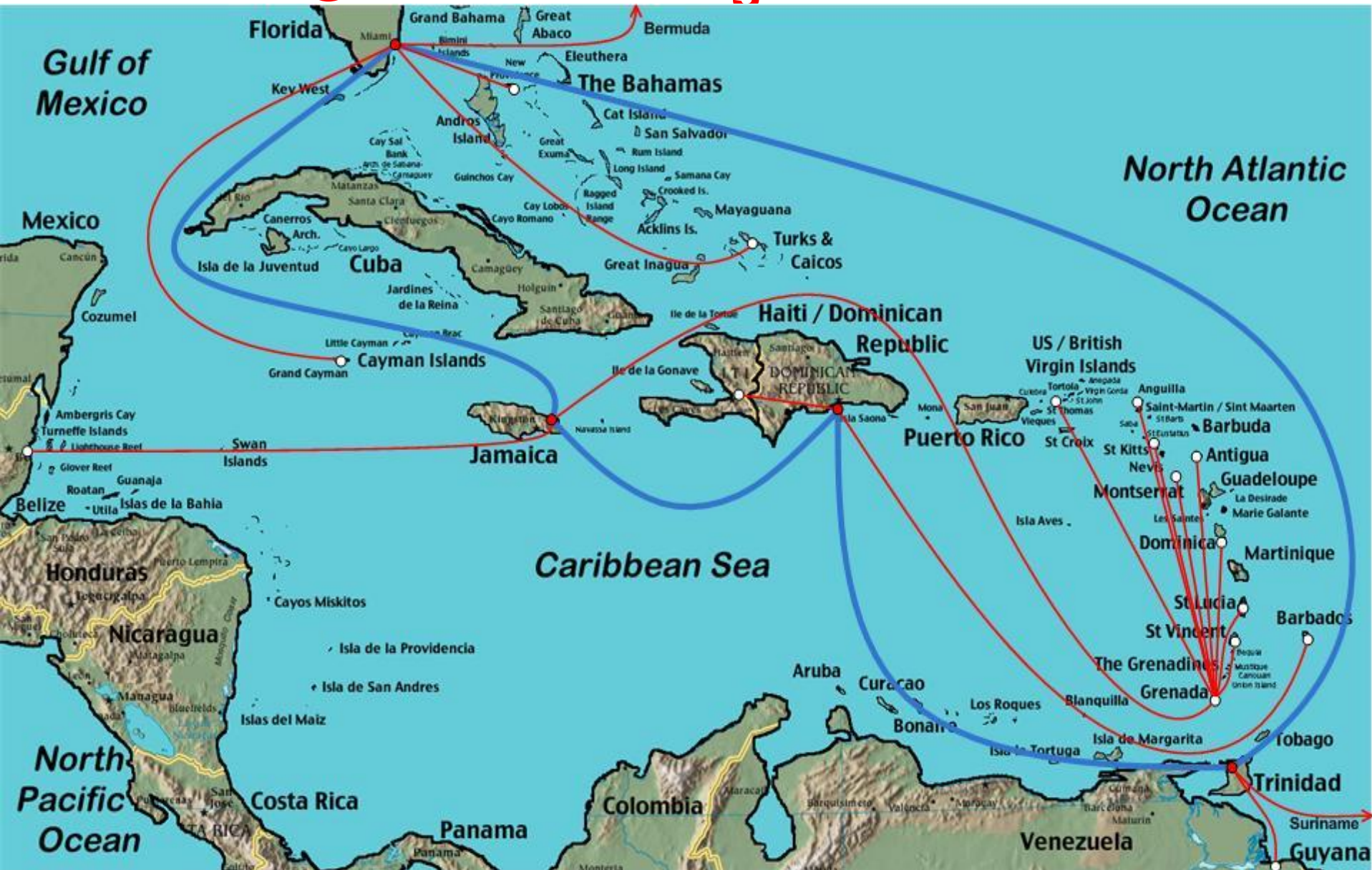
C@ribNET

Countries to be connected:

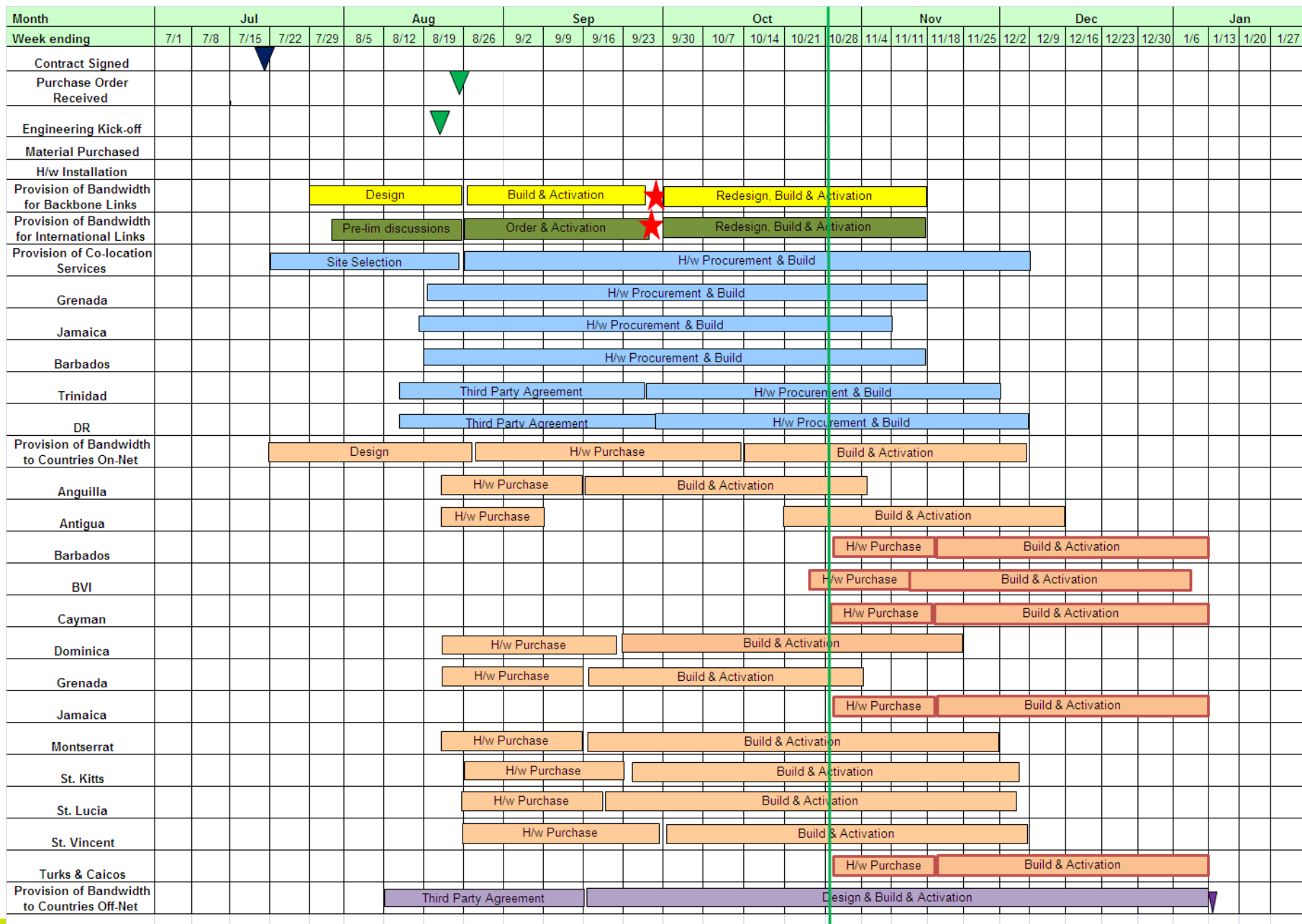
Anguilla
Antigua and Barbuda
Barbados
BVI
Bermuda
Cayman
Dominica
Dominican Republic
Grenada
Guyana
Haiti
Jamaica
Montserrat
St. Lucia
St. Vincent
St. Kitts
St. Lucia
Suriname
,Trinidad and Tobago
Turks and Caicos
Cuba?



C@ribNET with Regional Links



Time Plan



C@ribNET

On-Net

Anguilla
Antigua and Barbuda
Barbados
BVI
Cayman
Dominica
Dominican Republic
Grenada
Jamaica
Montserrat
St. Lucia
St. Vincent
St. Kitts
St. Lucia
Trinidad and Tobago
Turks and Caicos

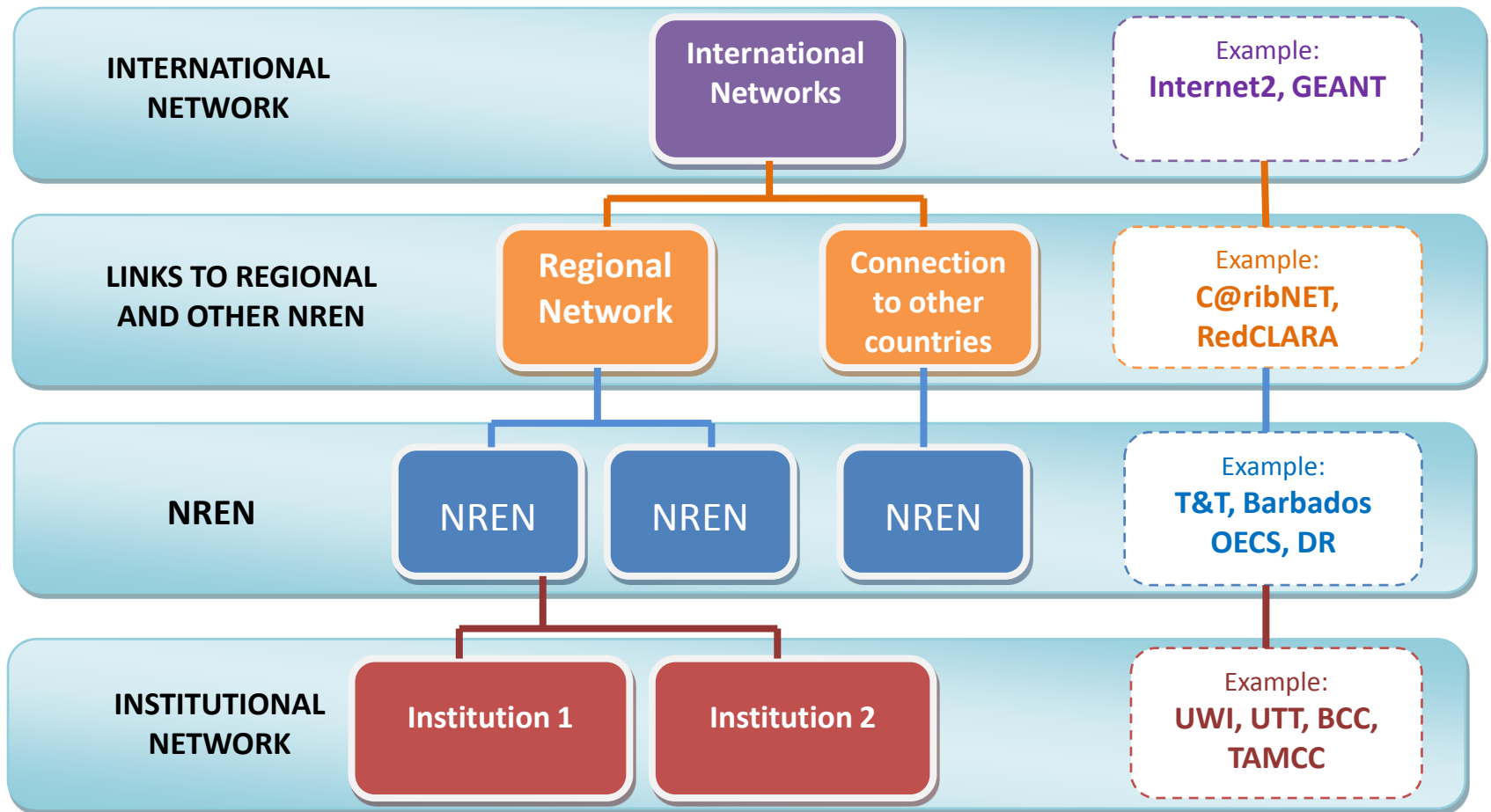
Off-NET

Suriname
Belize
Haiti
Bahamas
Bermuda
Guyana
Cuba?

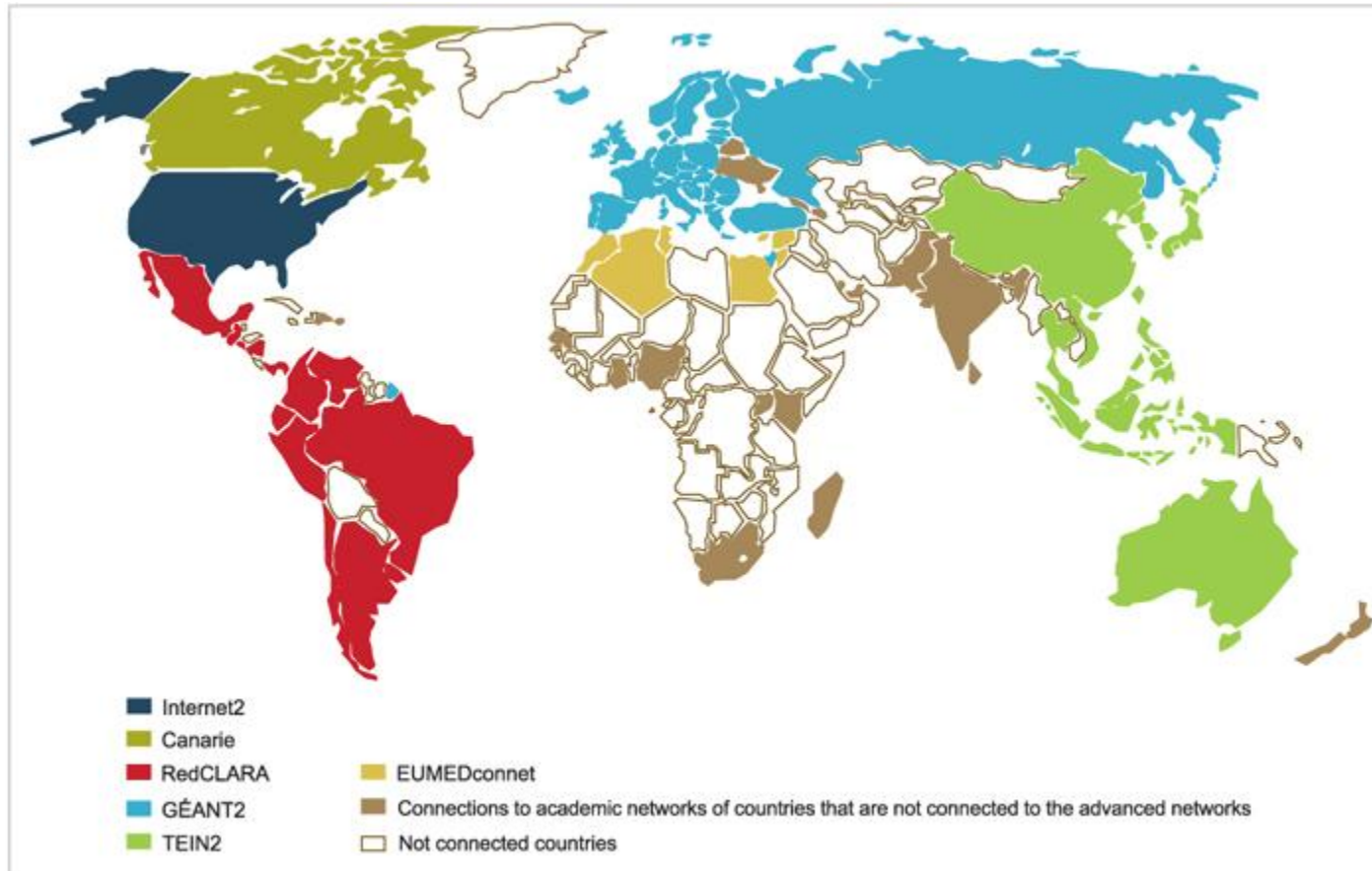
C@ribNET In Context

1. Designed to be integrated with the rest of the world's Knowledge and Learning Network: Referred to as Research and Education Networks (RENs)
2. Built around Communities of Interests at a National level: Referred to as National Research and Education Networks, (NRENs)
3. RENs and NRENs are provided on the basis that they are public goods

Building Blocks of Research and Education Connectivity



National Networks (NRENS) Around the world (Over 100 Globally)



Regional and International Research and Education Network

REGION

Europe

Asia-Pacific

Canada

Latin America

USA

Africa

Caribbean

NETWORK

GEANT

APAN

CANARIE

redCLARA

INTERNET 2

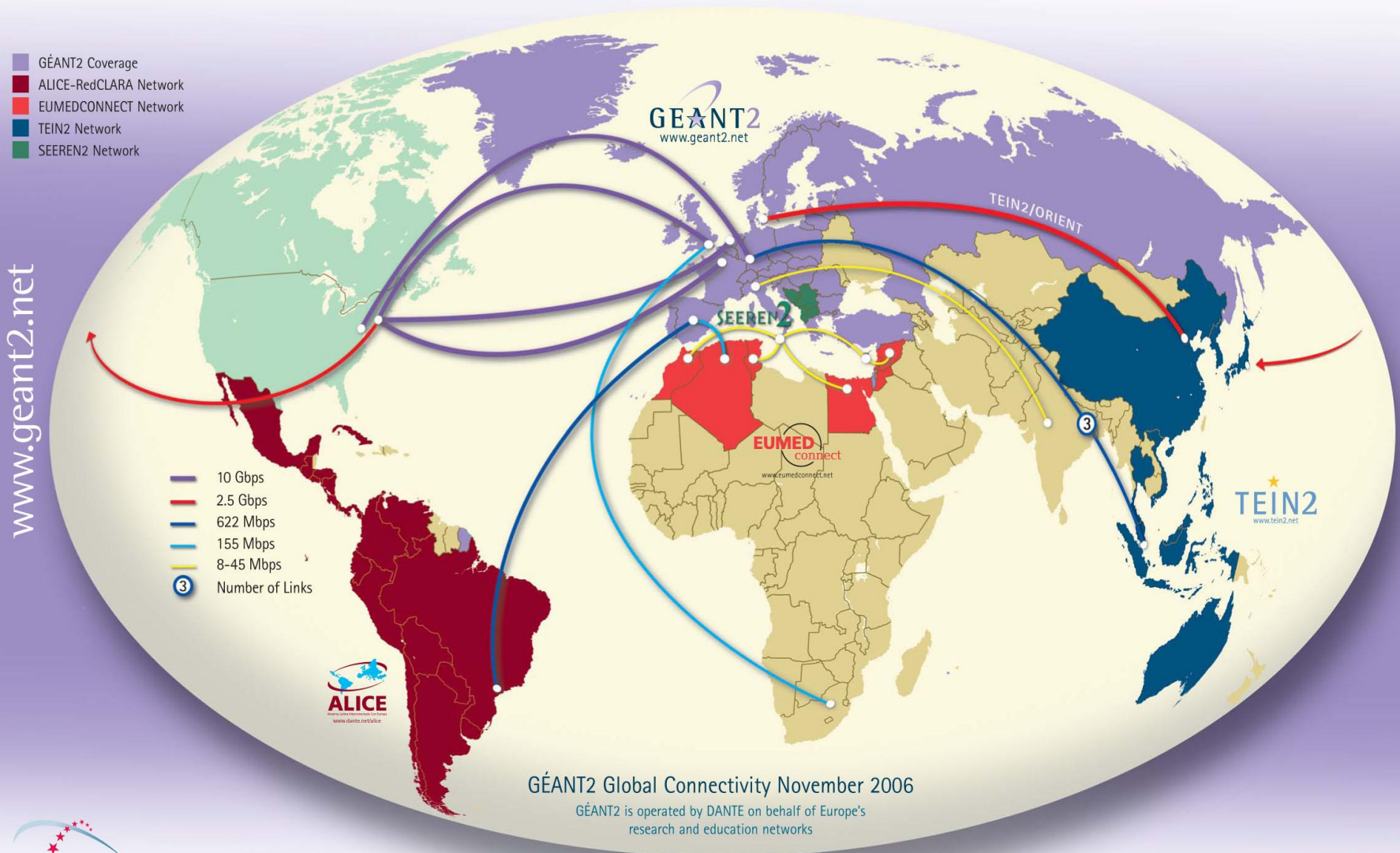
UBUNTUNET

C@ribNET?

CLARA's Network Jun/2010



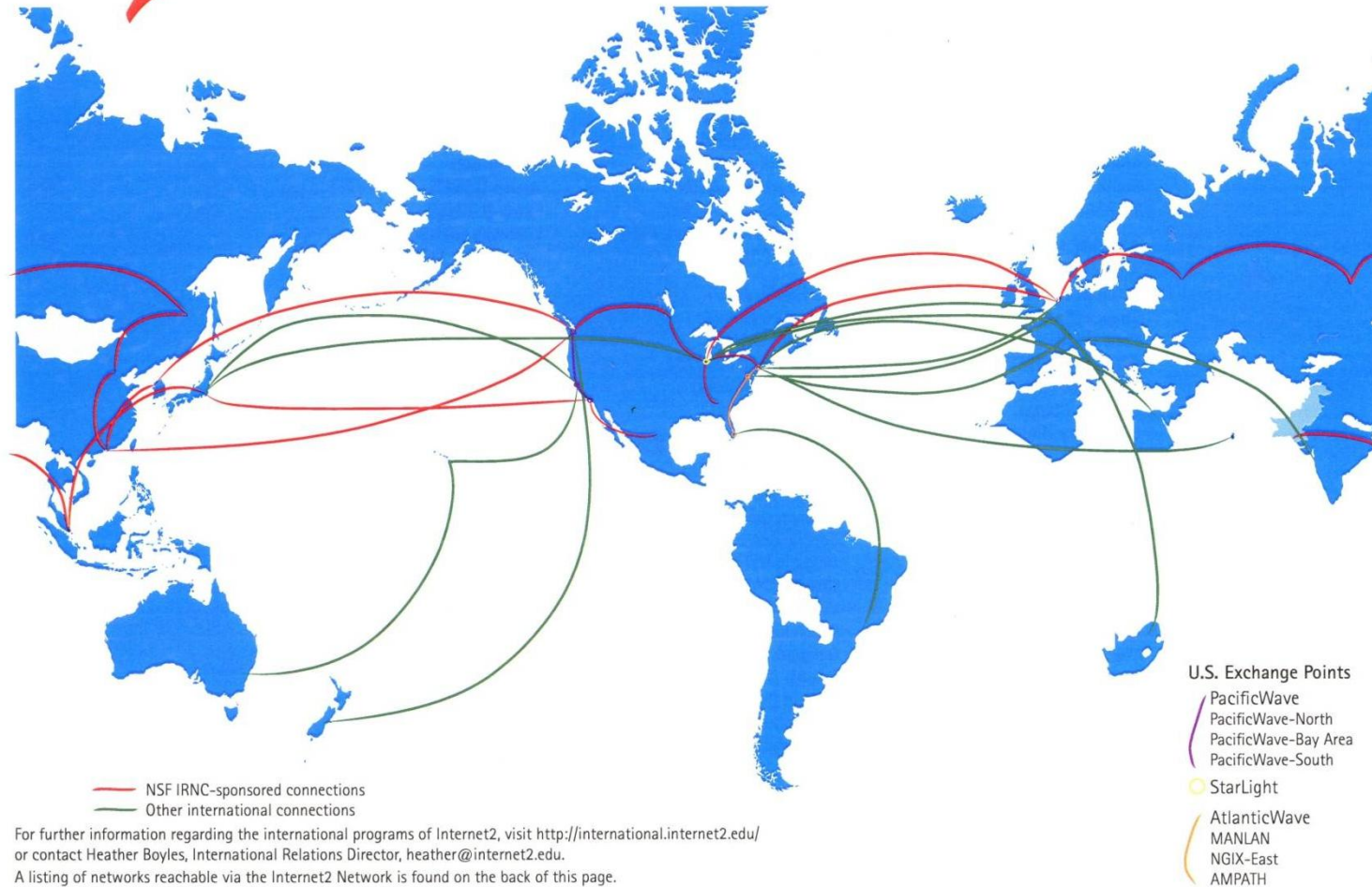
GEANT2 At the Heart of Global Research Networking



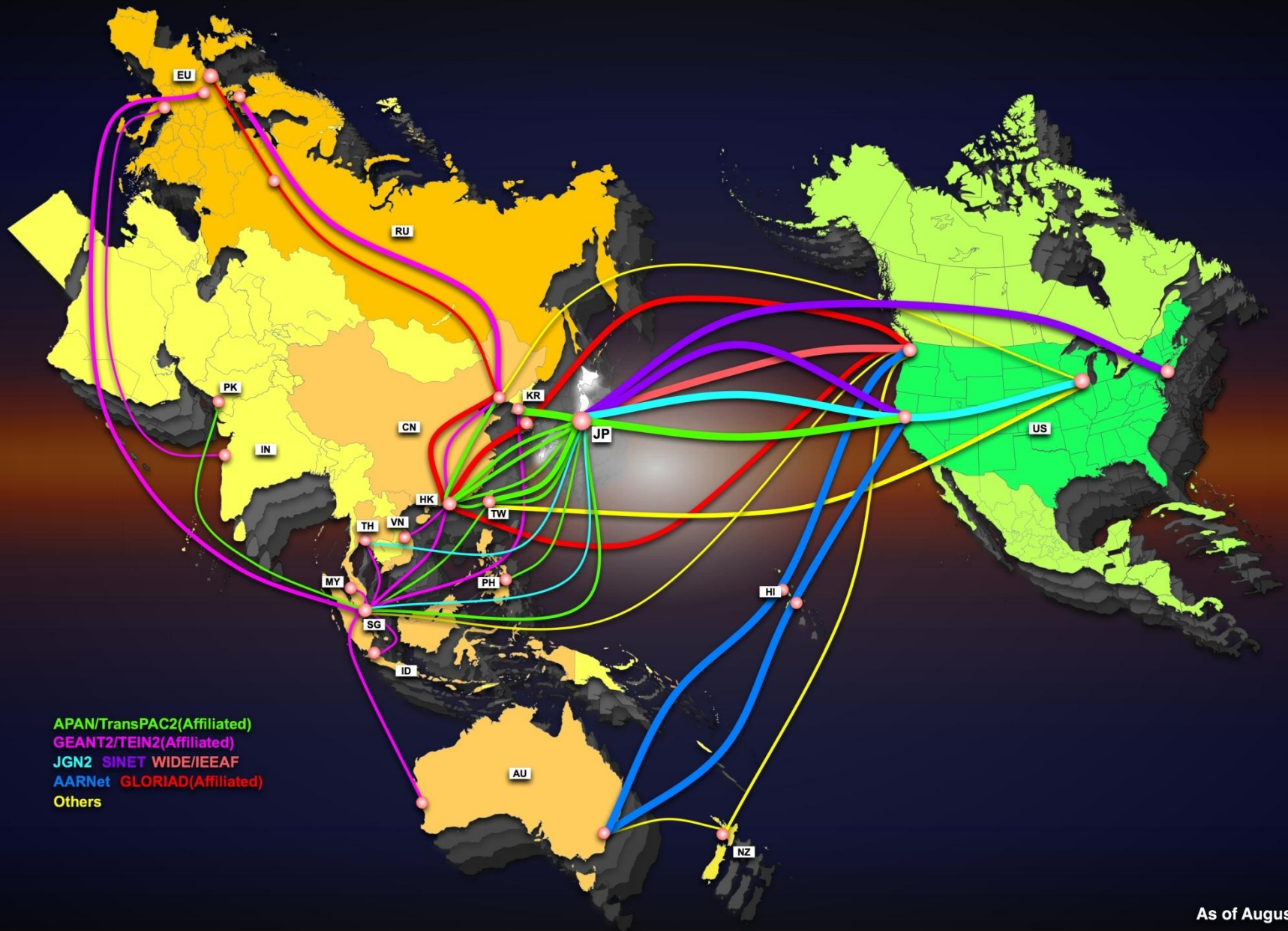
INTERNET 2



THE INTERNATIONAL REACH OF THE INTERNET2 NETWORK

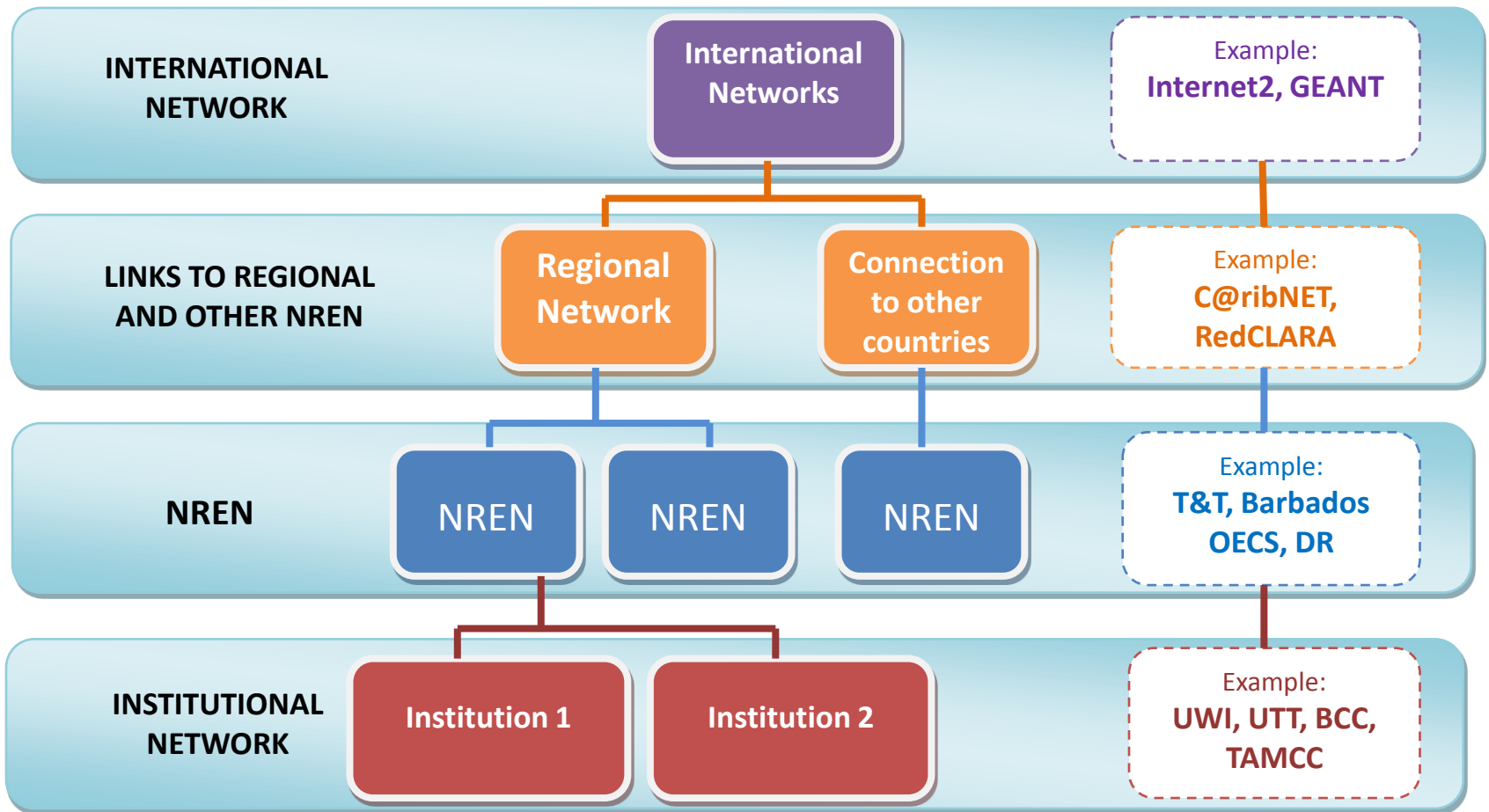


Asia-Pacific Backbone Topology



As of August 21, 2008

Building Blocks of Research and Education Connectivity



National Research and Education Network (NRENS)

A high performance national network connecting academic and research institutions (NREN), this network is increasingly viewed as the vital and core component of modern teaching, research and learning.

About a hundred countries in the world have adopted NREN as the centerpiece of their information and communication technology (ICT) plan for tertiary education institutions and for connecting research institutes and others such as schools and hospitals.

National Research and Education Network(NRENS)

- The NREN is essential to create economy of scale for building and sharing high speed networks and expensive research equipment and to run applications for advanced and collaborative teaching and research.
- Scale is the primary motivation for creating NREN. The more the number of universities and other institutions that participate in the NREN, the better the sustainability, the lower the cost per institution and the higher the negotiating strength of participating institutions.

National Research and Education Network (NRENS)

The formation NRENS generally comprise two major elements:

- The institutional and governance framework that binds the universities together and
- The underlying physical connectivity.

National Research and Education Network (NRENS)

NRENS in the Caribbean

Dominican Republic

Trinidad: at an advanced stage

Barbados have begun

NRENS Development

Funded by the IADB as part of their Regional Public Goods Programme (US\$600K)

Countries: Jamaica, Barbados, Trinidad, Belize, Bahamas, Dom Rep, Haiti, Suriname (Guyana)?

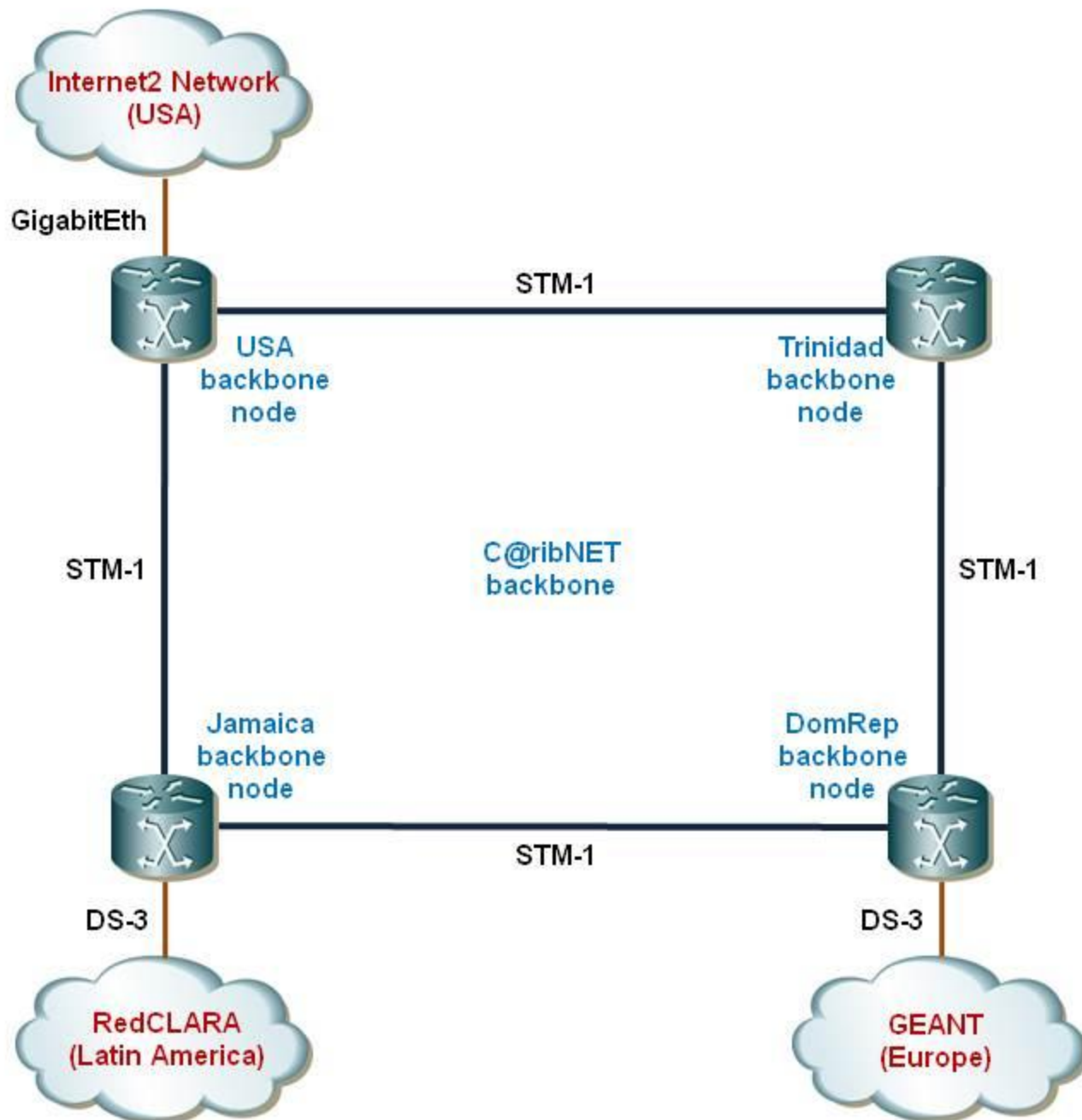
Work Done

- National consultations with all stakeholders
- Development of Blueprint for each country
- Sustainability strategy for C@ribNET
- Business Plan for Trinidad NREN

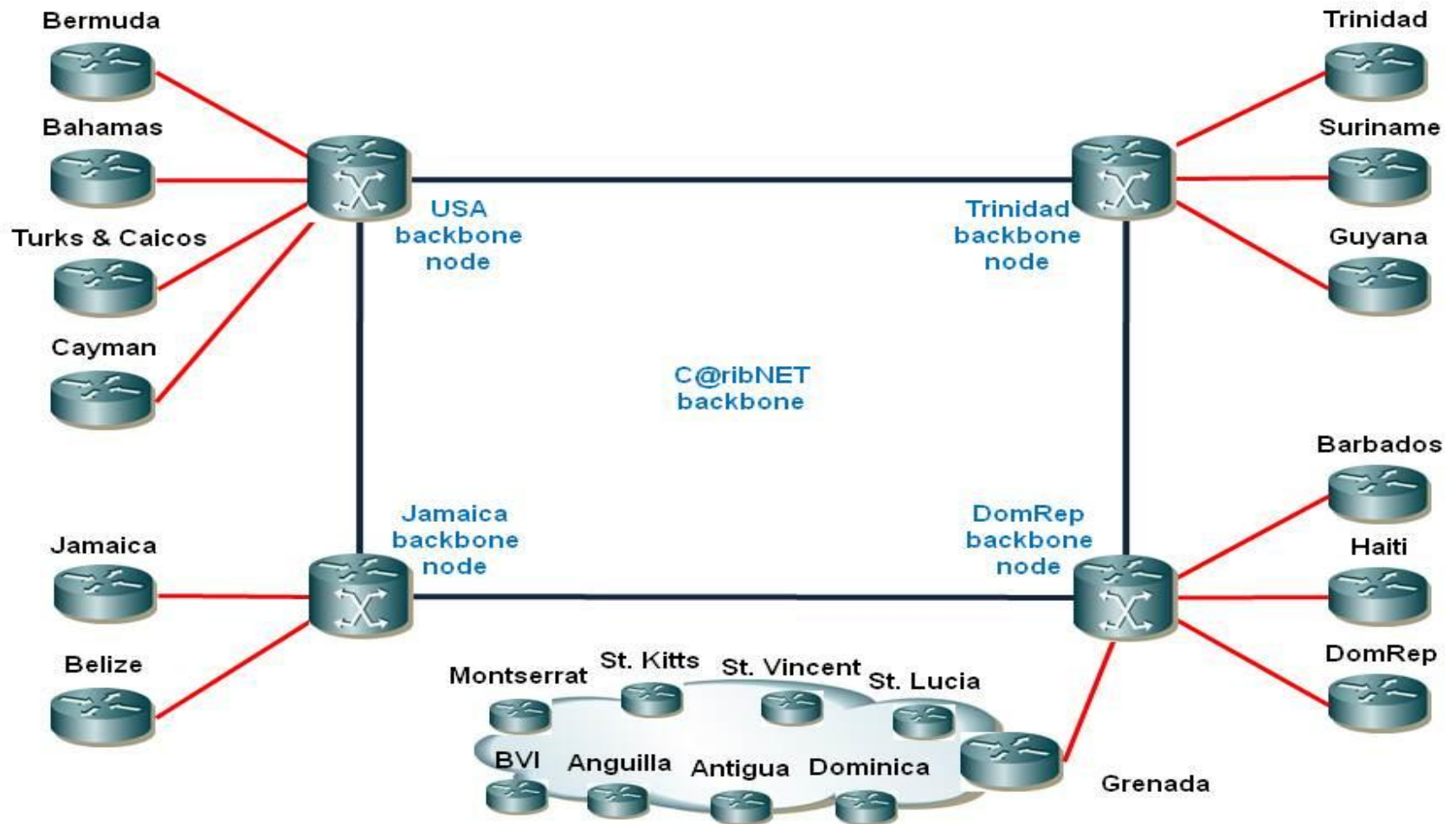
Planned NRENS Funding

World Bank CARCIP Programme (Loan)

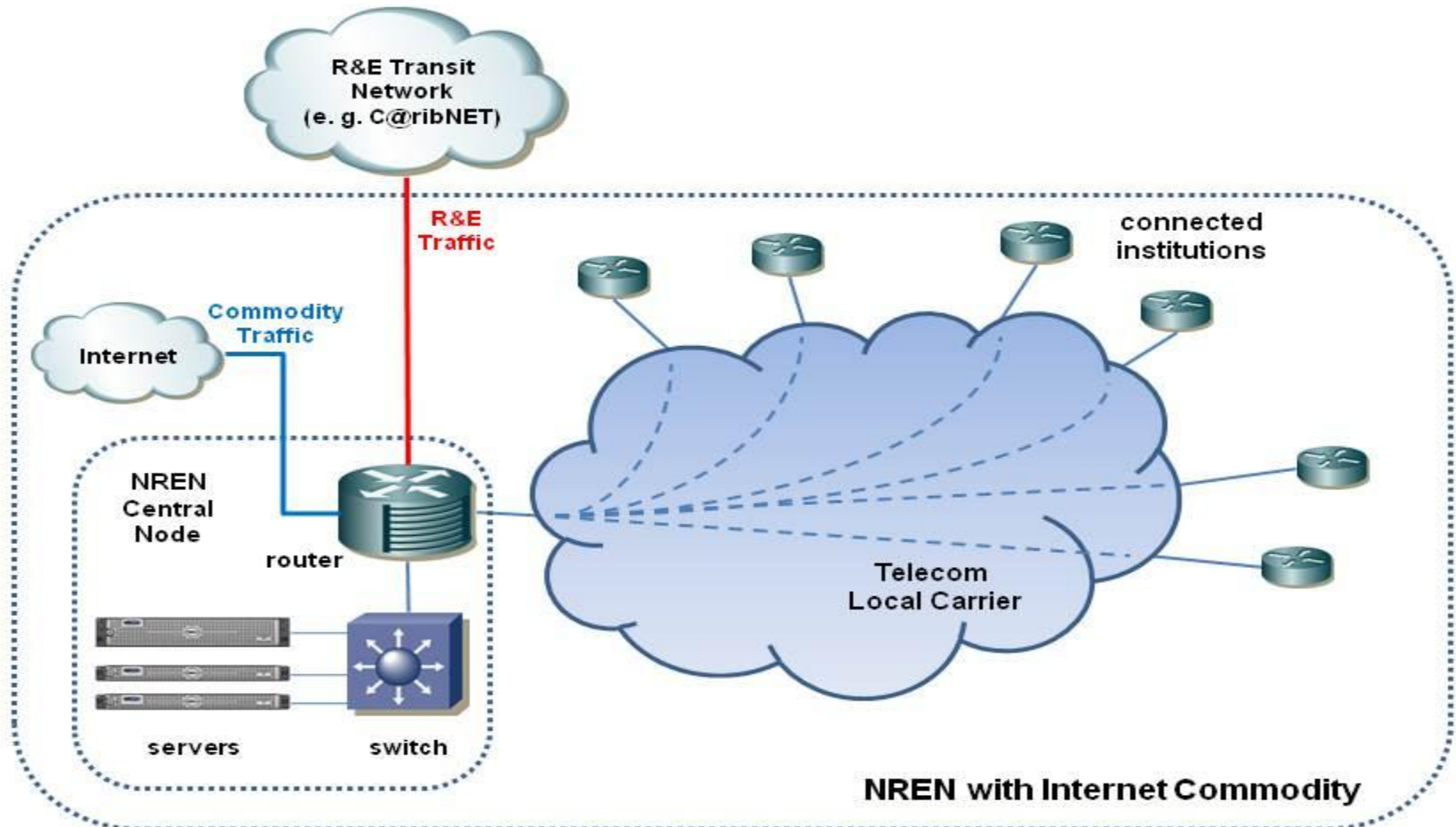
Grenada, St. Lucia, St. Vincent and Dominican Republic have committed to the Programme



C@ribNET Implementation based on NREN Model



National Research and Education Network (NRENs) Infrastructure



The C@ribNET Project Objectives

1. To support **collaborative** higher education and research among Tertiary Institutions within the wider Caribbean and between the Region and the rest of the world,
2. To promote and maintain education and research communities working on the development of related knowledge themes in support of the economic development of the Caribbean

3. Functional Cooperation in the areas of:

- Distributed and online learning (E-Learning)
- Collaboration between Public Officials
- Telemedicine (E-Health)
- Disaster management and collaboration
- Crime and security
- Culture
- Others

Anticipated benefits from C@ribNET

Students

- Greater opportunity for tertiary education to a much larger percentage of Caribbean citizens at significantly reduced costs; students in the OECS being able to access courses and programmes from Tertiary Institutions in any other Caribbean country without the need to travel
- Access to a greater diversity of educational opportunities across the region without having to leave your home country
- Greater catchment area for student-initiated research and access to a wider variety of authorities and key institutional repositories that is the enabling infrastructure for research

Anticipated benefits from C@ribNET

Collaboration and Partnerships Amongst Tertiary Institutions

- National Tertiary Education Institutions (TEIs) like UTT, UTech, and College of the Bahamas will have access to high bandwidth networks which extend the possibilities for regional collaboration in education and sharing of resources required for education and training critical to regional development, for example, pharmacy education at UTech to a regional student body
- Expansion of joint degree programs offered by TEIs across the region like, for example, UTech's programme in Tourism & Hospitality Management
- Development of more collaborative joint distance programmes like the Early Childhood Education Diploma program now in production between Shortwood Teachers College of Jamaica and the T.A. Marryshow Community College of Grenada

Anticipated benefits from C@ribNET

Education and Research

- Increased international recognition, reputation and income for local researchers by connecting them to bespoke international researchers and research centres for joint research initiatives and fee-paying collaborative work
- Increased visibility of established Caribbean knowledge centres like The UWI's Tropical Metabolism Research Institute (TMRI) and CDERA by providing interactive virtual access to them from the outside and at distance using the high bandwidth connections of C@ribNET
- Extended capabilities and outputs of Caribbean research and knowledge centres by providing remote access to resources not readily available in the region like, for example, massively parallel computing power, instruments and applications not available in the region that would enable their research initiatives

Anticipated benefits from C@ribNET

Functional Cooperation

- Improved functional cooperation with regional treaty organizations connected to each other and to global networks in collaborative mode
- High definition telepresence capabilities supported by the high bandwidth telecommunications network so that high-level regional meetings can take place remotely with a fidelity and ease and make it appear as if all participants are in the same room
- Improve regional healthcare delivery by using the network for telemedicine initiatives, inclusive of instruction for health care delivery at distance, for example local teams in regional hospitals being able to perform complex operations locally while under instructions from highly-skilled specialists that are remotely located

Anticipated benefits from C@ribNET

Culture & Cultural Expression

- Exposure of rich Caribbean culture and traditions to the rest of the world from its native habitat via high-speed network provided by C@ribNET
- Providing musicians and artistes capabilities for remote rehearsal and performance appearance at events via high-speed networks
- Export-led growth of Caribbean cultural industries coming on greater exposure and ability for remote audiences to experience Caribbean culture

Anticipated benefits from C@ribNET

Reduced cost for commodity Internet bandwidth

Through aggregation of bandwidth requirements of institutions connected with the network, CKLN will be able to bulk purchase bandwidth from local or international ISP at a reduced price and pass this onto the institutions

C@ribNET Shared Services offerings

Knowledge Management Platform

- Mirrors of Development Data warehouses
- Regional Repository for Research Data and Information
- Regional Repository for Education Statistics
- Regional Repository for Health Statistics
- A Multimedia Platform for Dissemination of Public (Govt) Information
- Portal for Regional Trade Statistics
- Caribbean Labour Market Portal
- A Digital Library for the Caribbean
- Open Educational Resources Depository

C@ribNET Shared Services Offerings Knowledge Management Platform

- *Measuring the Information Society in the Caribbean*
- *Tracking the Millennium Development Goals (MGD) of the region*
- *Support for evidence-based policy development in furtherance of the CSME*
- Portal for Regional Trade Statistics
- Commodity internet access for improved institutional connectivity and cost management

C@ribNET Shared Services Offerings

- Learning Management System[s] to support online and distance education and for improved course management
- Student Records Management System (SRMS) to improve student administration and student services
- Videoconferencing to enable synchronous multimedia communication that will foster and improve regional collaboration across any number of functions or fields of endeavour

Enabling conditions to secure value from C@ribNET and achieve sustainability

- National policy for the establishment of NRENs
- Governments accept NRENs as a public good
- Institutions commitment to establishing NRENs and take responsibility to drive the process
- Institutions commitment to a collaborative approach for content development at a national and regional level and aggressive push for the development of content
- CKLN's ability to leverage C@ribNET's infrastructure for the provision of shared services to NRENs and public institutions
- NRENs are fully represented in the governance arrangements of C@ribNET

C@ribNET

- How can this group help to contribute to the continued development and push the C@ribNET Agenda?
- Advocacy
- Collaboration
- Partnership

Project proposal

The big gap is: Applications and content

CKLN would wish to put forward a project for:

- Content and Applications (courses and programmes) development for use on C@ribNET
- Capacity building and institutional strengthening to develop the appropriate platforms for the delivery of shared services (Knowledge management)
- Continue the development NREN

Sustainability

One of the dependency in achieving sustainability of C@ribNET is the rate of acceleration in the decrease of broadband costs.