Caribbean R&E Developments: Projects & Infrastructure

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The Caribbean’s Regional Research & Education Network

- The Caribbean Context for an R&E Network – opportunities and constraints
- C@ribNET Infrastructure: Origins, The Present, the Future
- Priority Projects
- Necessary Collaboration & Support
The Caribbean Context for an R & E Network

- The Caribbean is one of the newest regions of the world with a research and education network or related infrastructure.
- Challenges for the R&E Network and NREN development in the region include population size, geographic size and spread as well as equity and access.

Comparative Size

Comparative Population

Map data ©2014 Google, INEGI
The Caribbean Context for an R & E Network

However....

- The Caribbean has lost 10–40% of its labor force to emigration to OECD member countries.

- No one country in the Caribbean can afford to provide the type, diversity, scale and scope of education that is necessary to fuel their economic growth and become globally competitive.

- The current modality of education development and delivery in the Caribbean is not globally conformant, not affordable and not sustainable.

The Caribbean has seen progress in education in recent decades:

- Near universal access to Primary and Secondary education

- Expansion in tertiary education
Due to the varying levels of readiness of the emerging NRENs, the CKLN Assembly has agreed that C@ribNET should be strengthened to operate as a Regional-REN.

C@ribNET will become the main R&E connectivity provider for all institutions in the Caribbean, while the building blocks for the in-country NRENs are developed and cemented.

CKLN is therefore
- assuming the role of providing NREN services to institutions
- facilitating the development of NRENs through collaboration with the national resources.
EU funds were secured and spread across 19 (nineteen) countries to support
• the development of the core,
• the international connections, and also
• provided infrastructure for the NRENs.

CKLN’s lease with C&W terminates in
February 2015

- BACKBONE STM-1 - 155MBps.)
- INTERNATIONAL LINKS - STM 1, DS3 (45MBps).
- BROADBAND NATIONAL NETWORKS
  in 16 countries - Average of 10 MBs bandwidth to connected institutions.
CKLN Scorecard
Infrastructure Developments

CKLN has
✓ provided the core technology backbone for building national broadband networks to 18 CARICOM countries, plus the Dominican Republic
✓ built broadband National Networks in 16 countries
✓ Connected these countries to the rest of the world
✓ Enabled 35 institutions in CARICOM member countries to connect to the network.
✓ An additional 40 institutions are expected to be connected by the end of 2014
✓ Established a Task Force in each country working to establish appropriate governance & technical arrangements for bringing NRENS into being
✓ Conducted conduct training for institutional network engineers representing each Member State
✓ Procured a portal to facilitate collaborative work
✓ Provided other portal services, e.g. video conferencing, document sharing and provided training for NRENs and CARICOM agencies
Services to be provide by CKLN to institutions connected to C@ribNET

- Provide IP addresses and ASN numbers to institutions so they can access all services provided by C@ribNET and other global R&E Networks

- Advise and guide institutions of the skills and technical training requirements to support institutions connected to C@ribNET

- Facilitate access to high performance computing and international datasets for institutions connected to C@ribNET and broker agreements and partnerships with other institutions for resource sharing.

- Provide high bandwidth capacity to institutions for internet access for high-value, demanding applications and data
C@ribNET Infrastructure Plans

2014
- CARICOM is in negotiations with the EU for EDF11 funds.
- ICT identified as one of CARICOM priority areas, & C@ribNET integral in 5 year Strategic Plan ==> High expectations for securing funds from the EU for C@ribNET beyond 2015

2015-2030
- CKLN intends to secure an IRU for 15 years
- Upgrading the core from STM1 to 1Gig.
- This will free CKLN to focus on developing apps and services
- Lead to greater sustainability of C@ribNET

Extend connection to C@ribNET to Haiti, Guyana, Martinique, Guadeloupe, French Guyana, St. Maarten and the ABC Islands

NO GUARANTEES
YES
MAYBE
OTHER OPTIONS?

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New Impact Projects

- Health
- Crime & Security
- Education
HUGH WYNTER FERTILITY MANAGEMENT UNIT, UWI PILOT TELECAST

- Introduced and demonstrated Minimal Access Surgery (MAS) and promoted current and potential uses of C@ribNET to enhance the services of the Unit to benefit students and its clientele
- Another demonstration was made to Ministers of ICT and included a connection to JANET in the UK

DENGUE FEVER AND CHICKUNGUNYA (or CHICK-V) SEMINAR
The main objectives are to:

- Initiate the establishment of a medical/health related community with a focus on dengue fever that uses the R&E networks in the Caribbean and Latin American region
- Demonstrate core principal of CARICOM - functional cooperation – CKLN, CARPHA, CTO, CCCCC
- Collaborate with DANTE, TEIN*CC, RedCLARA and Internet 2
- Proposed date: June 12, 2014, in T&T
CARIBBEAN POLICE ACADEMY PROJECT

- Goal of the project is to connect 13 Caribbean countries together using virtual collaboration technology to facilitate
  - Regional Training
  - Enhancing regional security
  - Strengthening collaboration among member institutions and extra-regional partners.

- 35 Police training academies from across the Caribbean will be connected to C@ribNET

- The CKLN will enable each institution to participate fully and securely on the same platform fostering:
  - Information Sharing
  - Collaboration
  - Streamlined Training Delivery

The partnership between the U.S. Department of State’s Bureau of International Narcotics and Law Enforcement Affairs (INL) and CKLN benefits the entire region
MINI MASTER CLASS IN STEEL PAN – C@ribNET Launch - Feb. 2013

Collaboration between CKLN/C@ribNET, Internet 2 and JANET enabled this mini master class. Dan Nichols, Internet 2 Multimedia Specialist, provided invaluable assistance and guidance and even provided a short lecture to students at the University of Trinidad & Tobago.

EduVision 2014
CKLN supported JREN’s participation in EduVision 2014, Montego Bay Jamaica

Interactive workshops for academics, college lecturers etc:

- Cyber security
- Animation
- Disaster management
- Alternative energy
- Regional Health Forum: HIV-AIDS and the Diabetes
- Quality Standards for Distance Education
- Collaboration with JREN, B@rNET and TTRENT and OREN
Some Priority Applications and Shared Services

1. A Regional Digital Library for Caribbean Tertiary institutions
2. Single Virtual University space
3. Functional Cooperation-
   - Climate Change
   - Disaster management
   - Crime and Security,
4. Telemedicine and remote diagnosis
5. Shared Student Information system for Tertiary Sector
6. Support for Virtual Classrooms for E-learning
7. Knowledge Management (Regional)
Proposed Activities and Plans for Collaboration with other R&E Networks

- Seminar on Dengue Fever and Chikungunya Virus – June 17
- Paediatric Cancer – Columbia University, Bustamante Children’s Hospital (Ja.) - TBC
- Integration of Dance into The Primary Curriculum
- Visual Arts Online Programme - a proposed visual arts programme with a focus on contemporary visual practice, increase dialogue about and understanding of the visual arts of the Caribbean and to platform excellence in the arts while building bridges throughout the French, Dutch, Spanish and English speaking territories.
- Introduction of Steel pan into primary and secondary curriculum – “Pan In Education, PIE”
Proposed Activities and Plans for Collaboration with other R&E Networks

- Continued NREN development, especially hosting “Virtual Days”
- Encourage special Interest groups (especially in Disaster management)
- Strengthen C@ribNET portal
- Strengthen CARICOM Agencies towards functional cooperation
- Establish greater relations with UN agency events in the Caribbean
- Contribute to joint proposals for supporting R&E events & ventures – e.g. Virtual Caribbean Research Centre, Art Programme etc.
- Explore and facilitate continues Technical Training and study visits
THANK YOU!

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