

# Benefit of Research and Education Network(REN) and NREN Update



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## **Overview: Research and Education Network (REN)**

Provision of Computer networks for interconnecting research and education institution

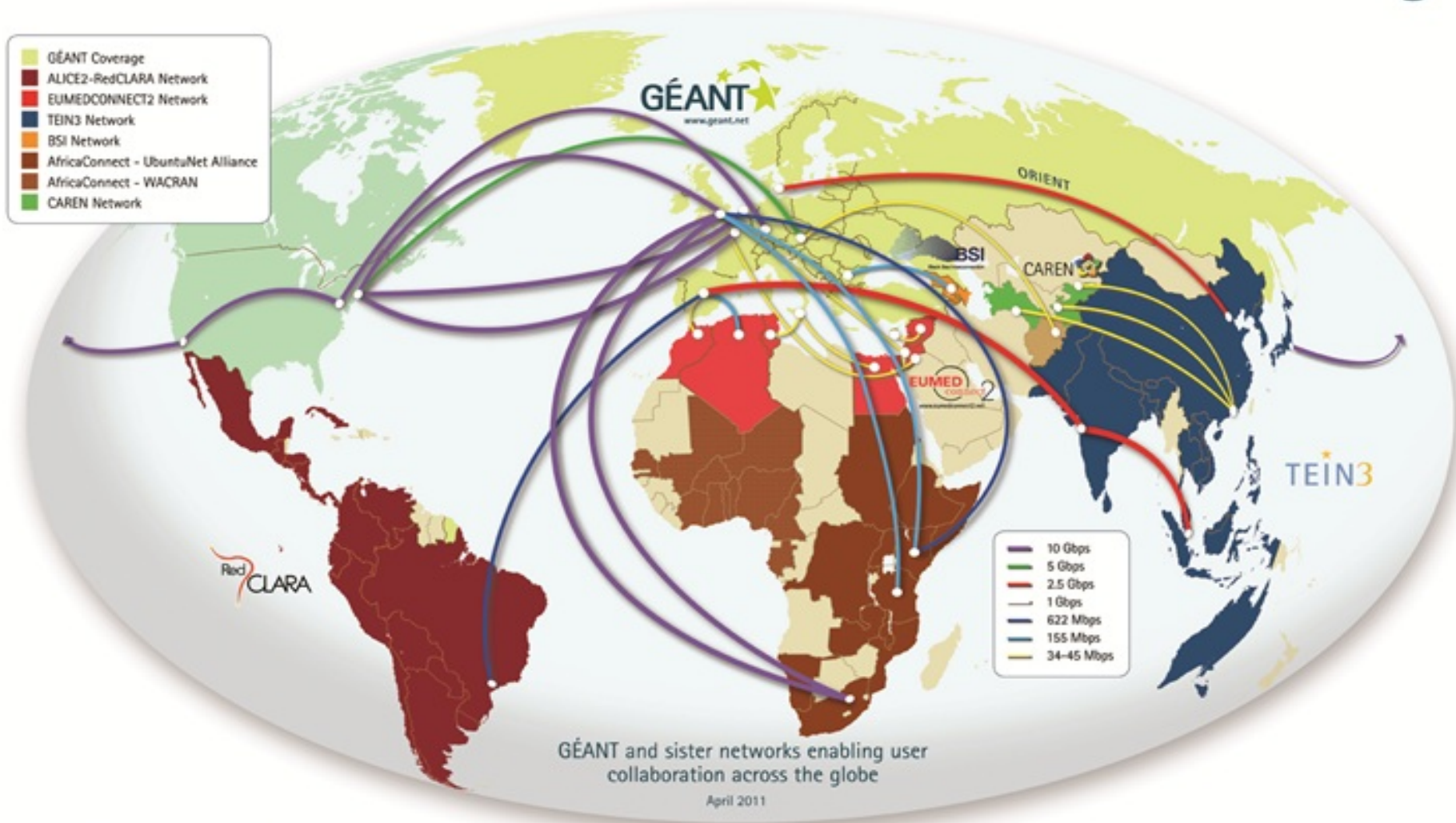
Were established more than 20 years before to support bandwidth – intensive applications , and moving large quantities of data

Operate by the research and education communities for the shake of sharing of knowledge , information and resources among the communities

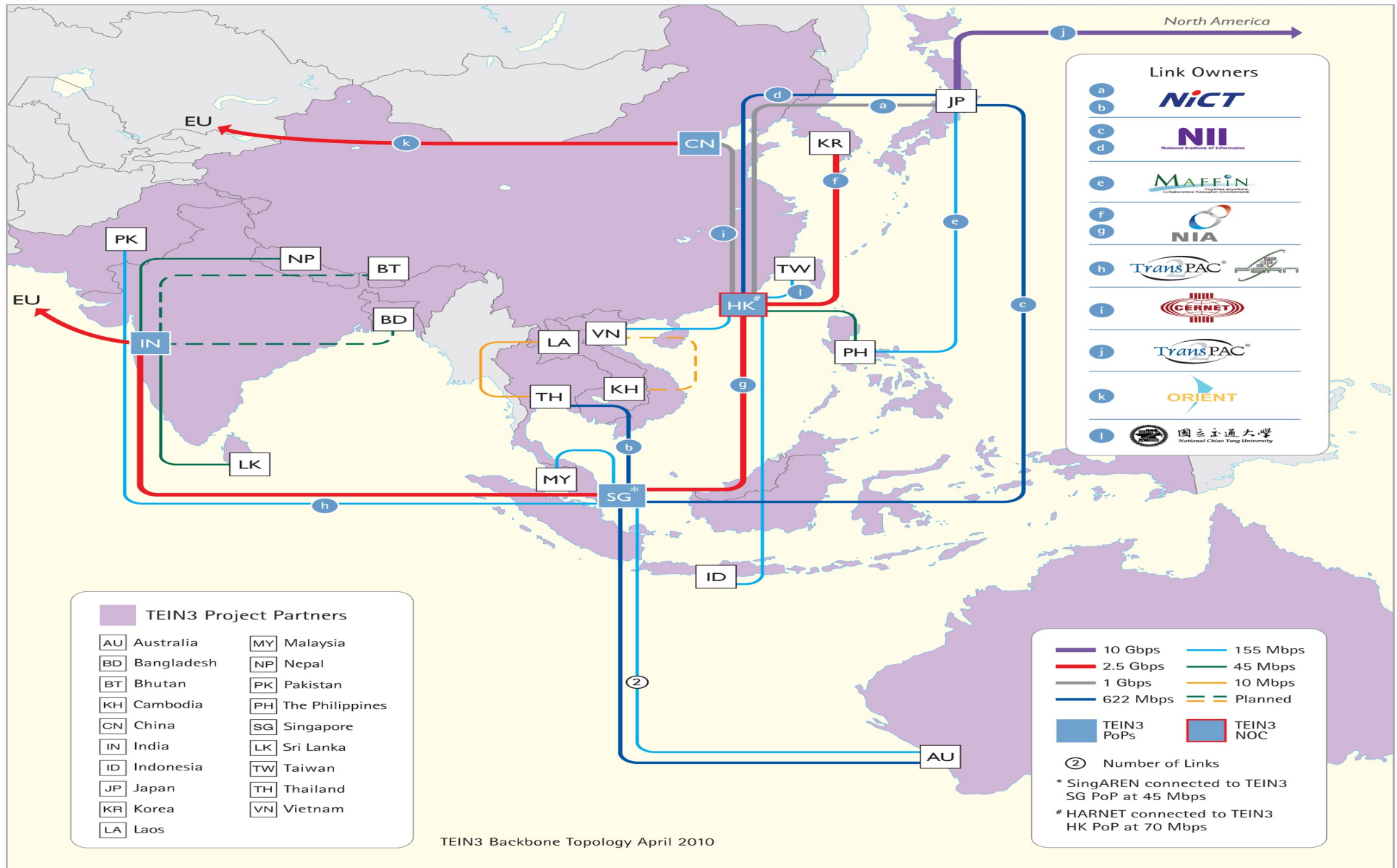
Unlike the “general” Internet it carries data related to education and research

# REN in Global Context

## GÉANT At the Heart of Global Research Networking



# REN in Asia Pacific Context ( APAN and TEIN3)





## **Why REN?**

- Ensures the high speed communication among the academic communities
- Offers various contents and the application with the investment of minimum resources
- fastest way to access global universities/research databases.
- Provide opportunity to work / joint project with academic communities.

## Who Manage REN?

In most of the cases, it is operated by not for profit organization. In our context, it is established and operated by Nepal Research and Education Network (NREN), a not for profit organization registered under Government of Nepal. All the countries have their own NREN.

### Existing Connection It has:

- Trans -Eurasia Information Network (TEIN)
- Internet2
- Asia Pacific Advanced Network
- A13
- GEANT2

## **Utilization of REN: A global perspective**

- ➡ High speed accessing with global knowledge and resources
- ➡ Natural disaster support – glacier, flood, earthquake warning, prediction, and monitoring
- ➡ Climate change research, meteorology, environmental monitoring and data sharing
- ➡ Telemedicine and remote diagnostics
- ➡ Link with grid initiatives, computing and data repository sharing
- ➡ Monitor emerging pandemics (bird flu, SARS, H<sub>1</sub>N<sub>1</sub>)
- ➡ Bio-informatics, agro-informatics, astronomy, eVLBI (grid of radio telescopes)
- ➡ Digital Heritage Exchange(ADHX)

## **Context of Nepal**

- Fastest access with global university/research databases
- Connect with grid initiatives, computing and data repository
- High speed access on free journals, research papers, digital library,
- Environment monitoring and Tele-medicine (DVTs)
- High quality video streaming and data transmission
- Strengthen cooperation among academy and research communities
- Tele - teaching, Tele-business, Tele-health



## **Context of Nepal : Nepal Research and Education Network**

Not for profit organization formed in 2007 , has the core objectives to establish global REN in Nepal

Single entity primarily responsible for the connection and promotion of REN in Nepal

Primary member of APAN and country representatives on TEIN<sub>3</sub> network

Has 45 Mbps TEIN<sub>3</sub> and 10 Mbps APAN R&E Connection

## Why we should connect with NREN?

- **Fastest access** among national, regional and global renowned academic, research and social institution via its high speed direct link.
- Access on free **journals and collected site links**
- Easy to **establish network relation** with local members as like communicating on the same LAN
- Creates **research environment, research trend** and enable opportunity for participating in joint research project across the globe.
- **Maximum Bandwidth** with little investment
- Support to strengthen **network infrastructure**
- Regular **Human Resources Development** activities

## **List of Network Connected Institution:**

- Kathmandu University
- Tribhuvan University Central Library
- Prime College
- Gandaki College of Engineering and Sciences
- Kathford Int'l College of Engineering and Management
- Advance College of Engineering and Management,
- Kantipur City College
- St. Xavier College,
- Khowpa Engineering College
- Nepal Wireless
- Kathmandu Model Hospital
- Health Net Nepal
- Institute of Medicine , Tribhuvan University
- Nepal Medical Colleges
- Skin Hospital and Research Centre
- Telemedicine Society of Nepal



Many Thanks for your  
Valuable Time.