

Lao REN / LERNET

(Laos Research & Education Network)

Speech Outline:

- **Laos and Higher Education**
- **Attempting in Establishment of LERNET**
- **NUOL is as Temporary LERNET**
- **To Establish LERNET**
- **...**

Bangkok, Thailand : 27/11/2018

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Director of IT Center
National University of Laos



Laos :

Area : 236.800 Km2

Population : 7.5 Millions

Ethnics : 49

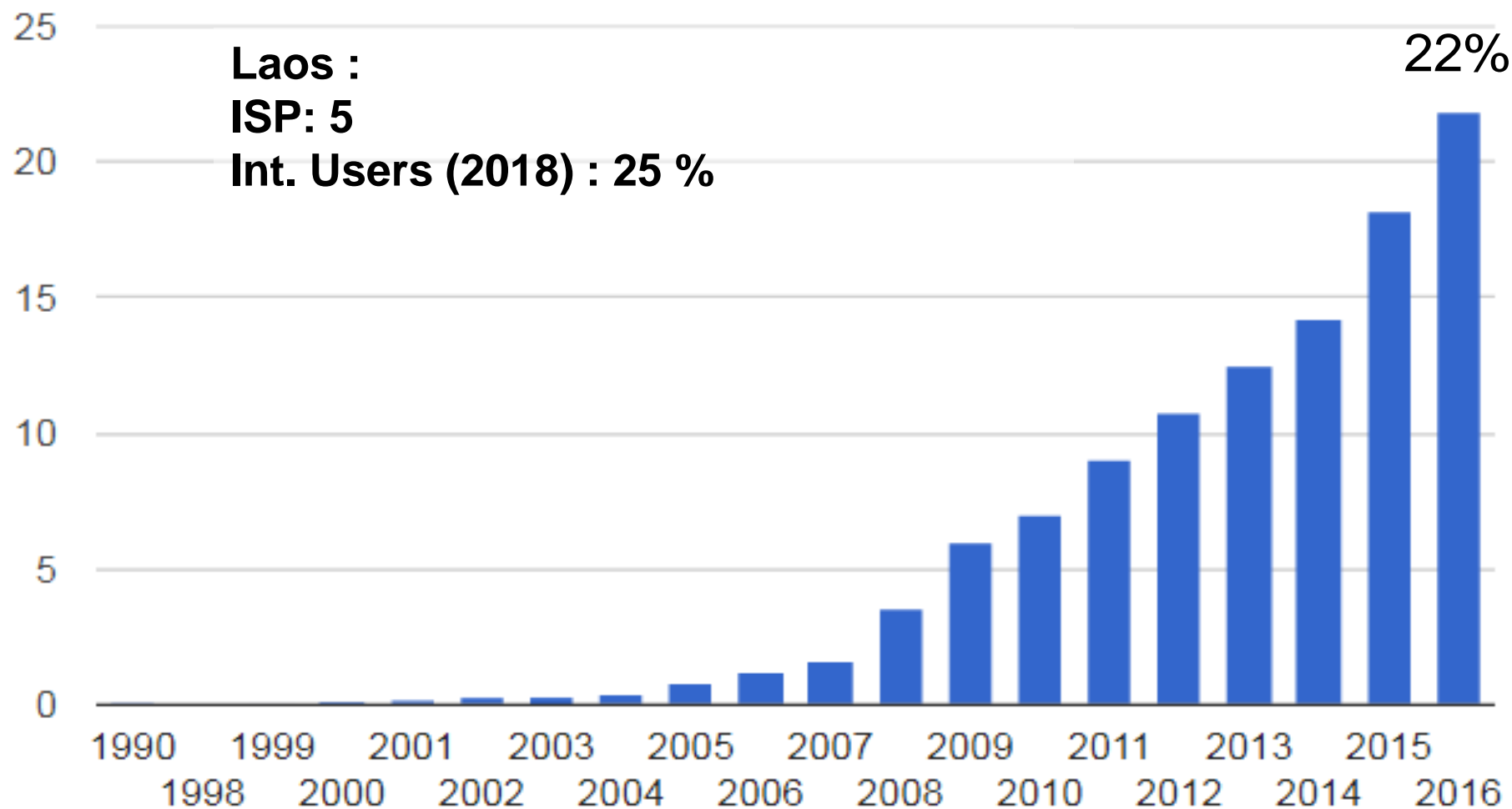
Mountain : > 70 %

Cap. City : Vientiane (>0.6M)

	Laos	Thai	Viet	Cam.	Mya.
Population	7.5 M	75 M	96 M	17 M	74
Total GDP	17 B	455 B	234	22.2 B	70 B
GEP/Capita	2260	6000	2435	1306	945

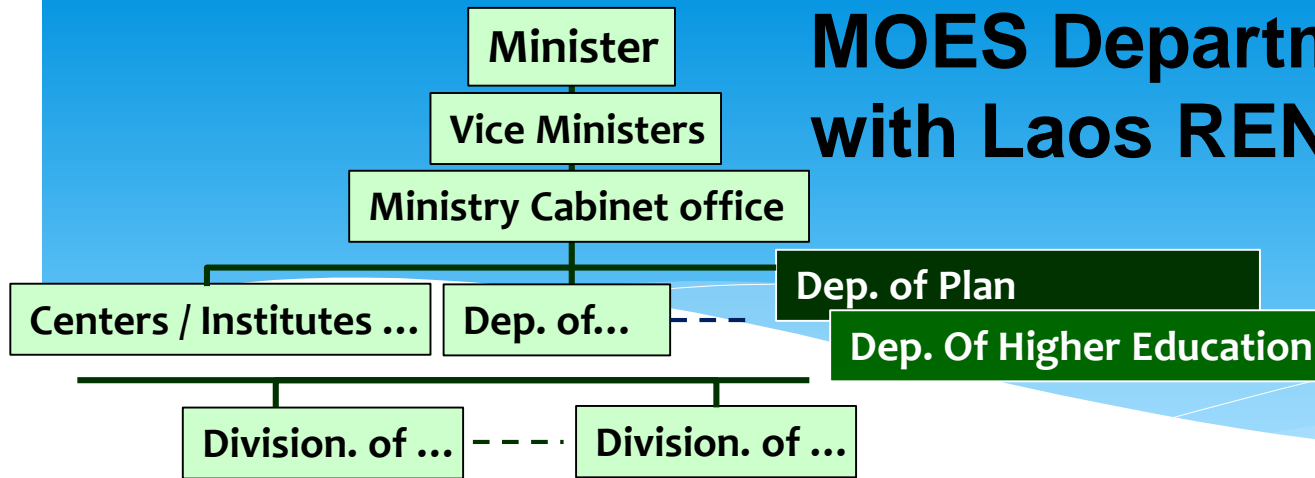
<https://tradingeconomics.com/laos/gdp>

Laos : Internet Penetration



https://www.theglobaleconomy.com/Laos/Internet_users/

MOES Departments involved with Laos REN



Lao RE Community

Higher Education Institutions

5 Public Universities 1
14 Public and Provincial Colleges
2 Private Institutes
29 Private Colleges
Others

Research Institutes:

Universities
NAFRI (N. Agriculture & Forestry Research Institute)
NAST (N. Authority on Science and Technology)
NERI (N. Economic Research Institute)
Other Research Institutes

NUOL is Largest Laos RE institution

NUOL has tried to be LERNET Hub (Why NUOL)

Largest University in Laos

- Student: 25,000 p
- Foreign Student: 749 p
- Teaching staff: 1217
- Admin. Staff : 508
- Campus : 5
- Faculty : 13
- ICT Infrastructure

Wider Collaboration

- AUN & Other Regional / International Membership
- MOU with 172 Universities & Int. Organization
- Grant Aid Projects for ICT Development (JICA, KOICA, Sida, ..., ADB)
- Interactive RE Activities

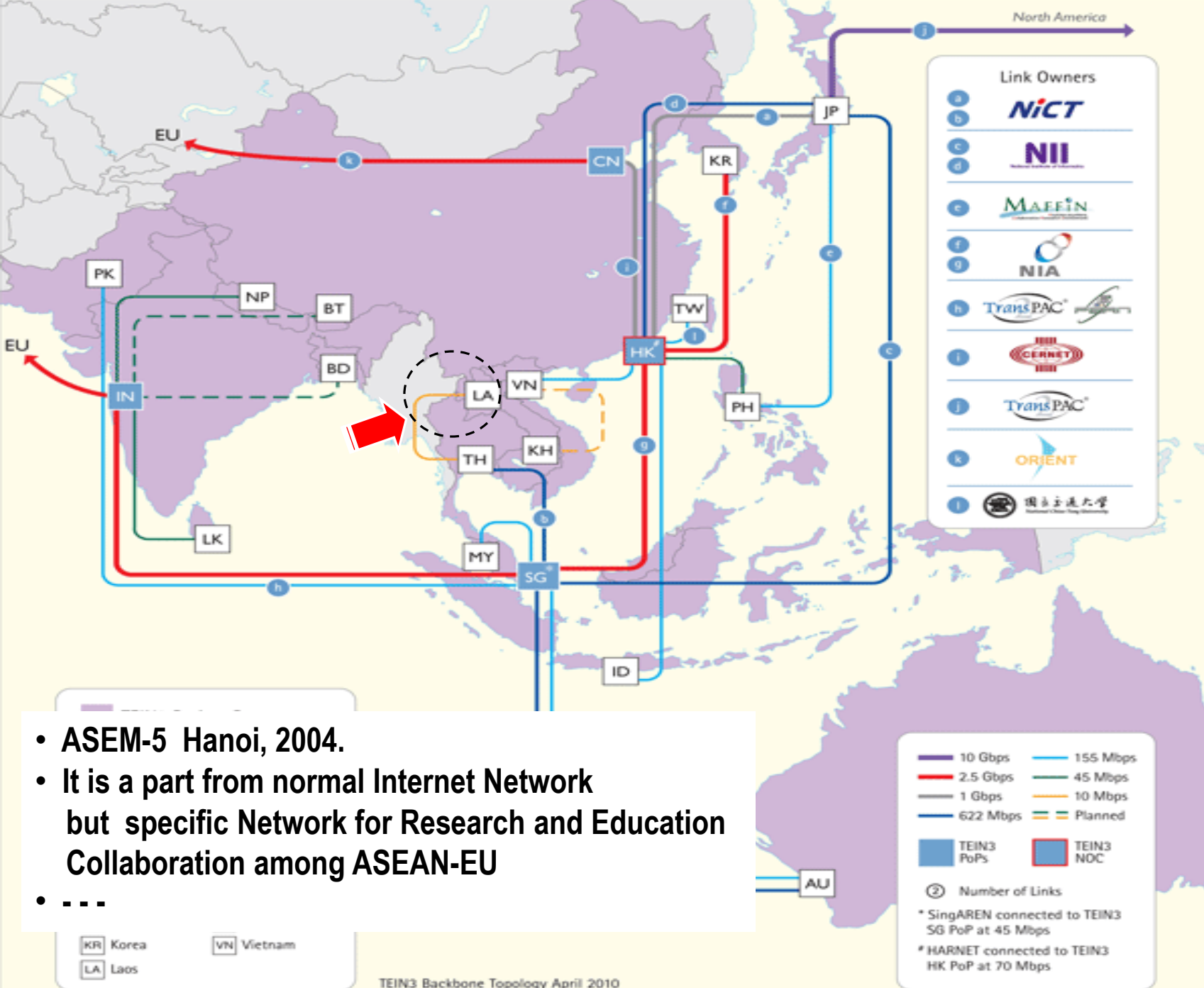
Better Qualification in Laos

- Program : 169
- Better Qualification
Ph.D / Doc : 102
Master : 561
- Education Systems
Face to Face
e-Learning
Distance Edu.

Education and Research

- Program : 169
- Better Qualification
Ph.D / Doc :
Master :
- Education Systems
Face to Face
e-Learning

**NUOL is
as Temporally LERNET**



- ASEM-5 Hanoi, 2004.
- It is a part from normal Internet Network but specific Network for Research and Education Collaboration among ASEAN-EU

• . . .



Some Attempting for LERNET

LERNET is an Organization :

- / LERNET (Laos REN) is as like as Consortium
(Organization among Multi RE-Institutions
 - Manpower
 - Plan, Objectives, Yearly Budget,
 - Activities for R&E
 - ...
- / Physical Link (Equipment)
- / Supports
- / ...

Some Attempts for LERNET Establishment

Participation:

- ▶ 2005 NUOL participated in TEIN workshop at Bangkok
- ▶ TEIN Experts (Korea / AIT) came to work with NUOL
- ▶ NUOL Technical Staffs have been trained, supported by TEIN/DANTE
- ▶ NUOL Technical Staffs were trained at UniNet (Thailand)
- ▶ UniNET Negotiated with TOT / CAT
- ▶ Yearly TEIN Meeting
- ▶ Others

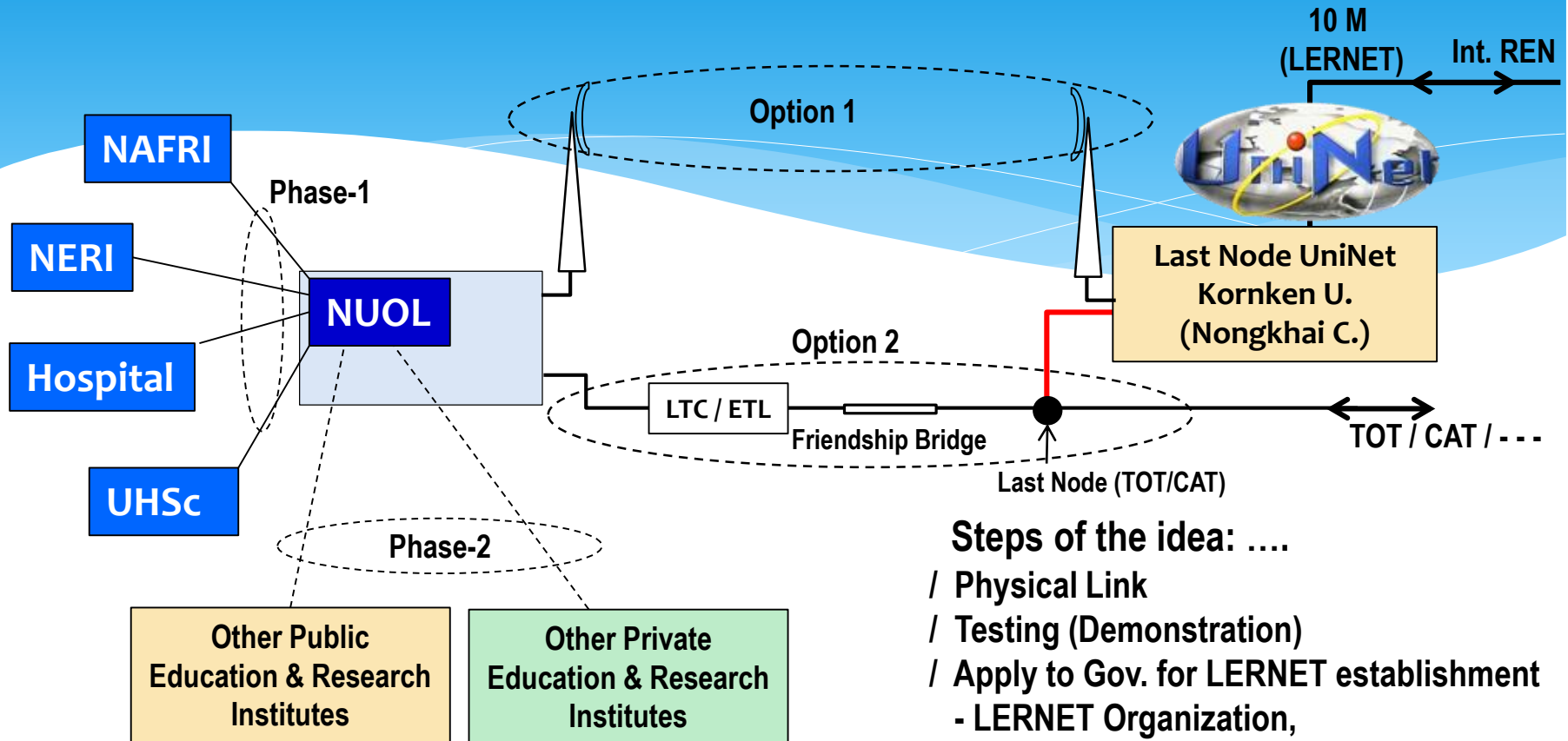
Technical Implementation:

- ▶ Microwave Transmission Testing (NUOL and Kornken U. Nongkhai Campus), but
/ **Regulation of Telecom.**
cross border
- ▶ Negotiation with LTC, ETL, Unitel for Fiber Link, but
/ **High Cost**
/ **Real implementation**
- ▶ ...

With Government:

- ▶ Prime Minister Office
- ▶ Ministry of Education
- ▶ Ministry of Science and Technology
- ▶ Ministry of Post and Telecom
- ▶ Among Laos Universities, Some Research Institutes
- ▶ ...

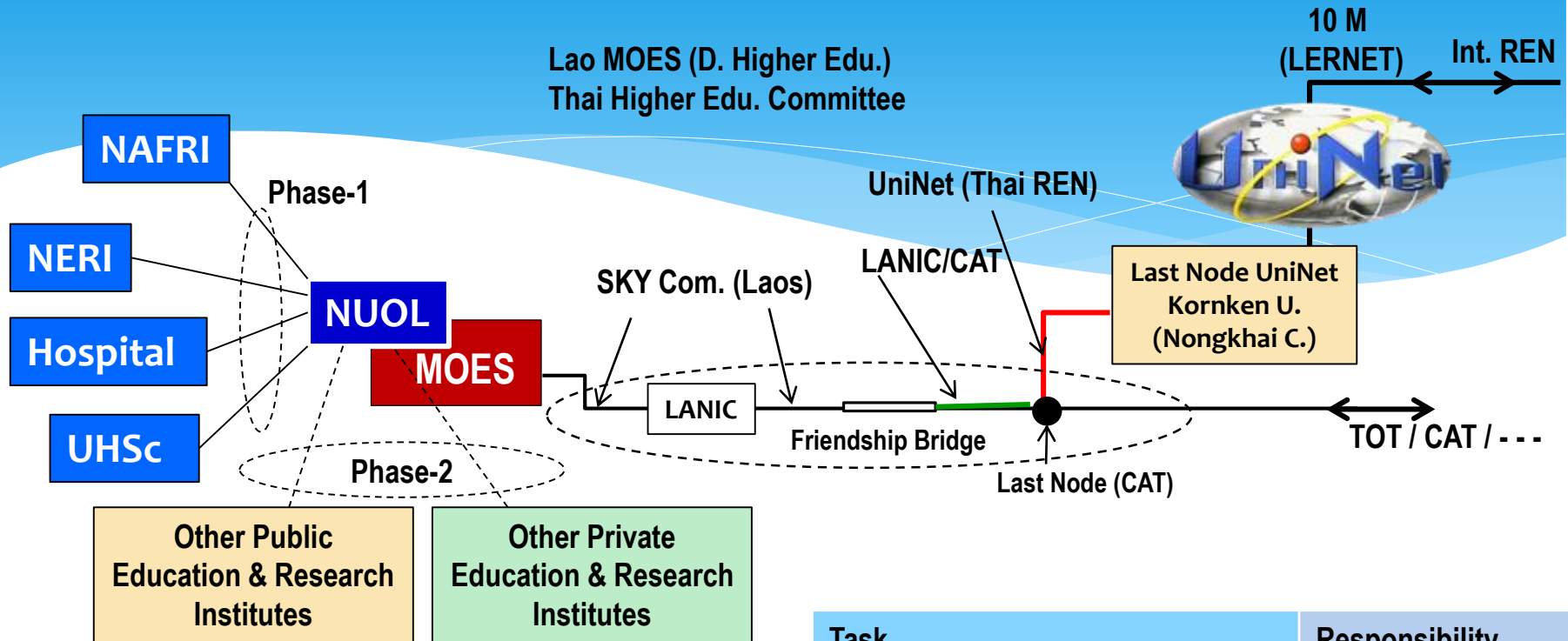
First Idea in LERNET Link



Steps of the idea:

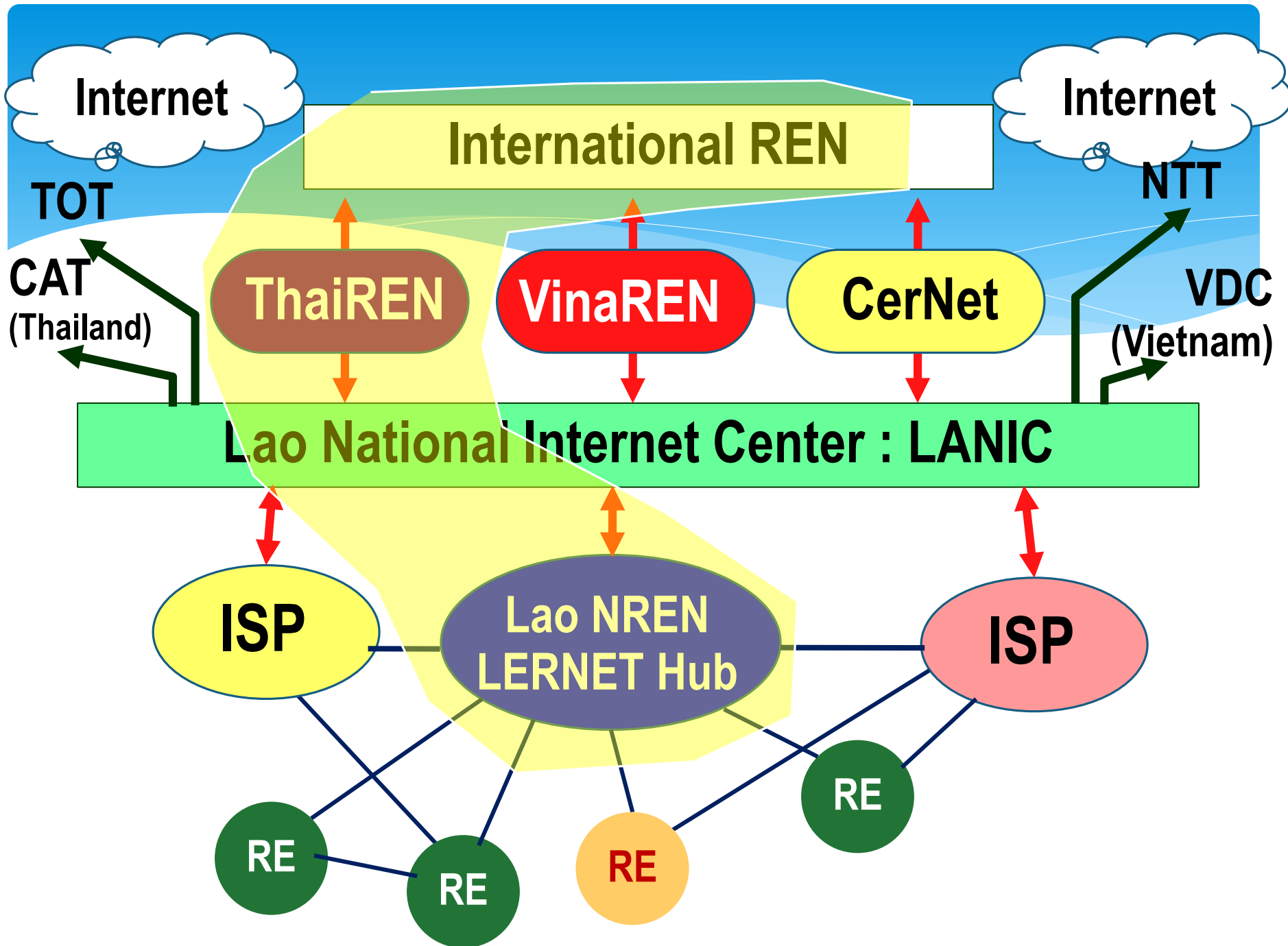
- / Physical Link
- / Testing (Demonstration)
- / Apply to Gov. for LERNET establishment
 - LERNET Organization,
 - Yearly Budget,
 - Membership Exp. (Phase-2)

To Success LERNET Link (Present Idea)



**Some Physical Network has been available (SHEP)
But Collaborative RE Activities Has been still small**

Task	Responsibility
Physical backbone link inside Laos	e-Government
Network Gateway Management	LANIC, MPT
LERNET (Organizational & Support)	NUOL (Present)
LERNET Physical Hub	NUOL
Application	Universities Research Institutes



Some LERNET Utilities Present / Future

Utility
Data
Accessibility
Deeper
Wider

Technical:
High Resolution,
Accurate, Secure
and rapid Data

RE Collaboration
In Country
Regional and
International

Share
Resources :
Human
Facility
Knowledge
Skill

In Country:

Teaching and Learning among Lao Education Institutions

- ▶ **To Reduce the problem of lacking of qualified lecturers and facility (School, Classroom) by e-Learning**
- ▶ **To develop HR among Institutions in Laos**
- ▶ **To support Management Information System Network among Institution and MOES**

Regional and International Collaboration in RE: Exchange, Share and Cooperation

- ▶ **To support Distance Education (e-Learning)**
- ▶ **To support Special Research Project (High Resolution Data)**
- ▶ **To support Distance Training**

Some Projects related with LERNET:

Strengthening of Higher Education Project : SHEP

- ▶ **Development Lao University Management System**
- ▶ **Improvement of University NOC (Facility and System)**
- ▶ **Strengthening of Research Activities in University Level**
- ▶ **NUOL will be acted as a Hub**
- ▶ **Other Studies for Laos Universities ICT Development**
- ▶ **...**

ASEAN University Network

ASEAN Cyber University (e-Learning) Project : ACU

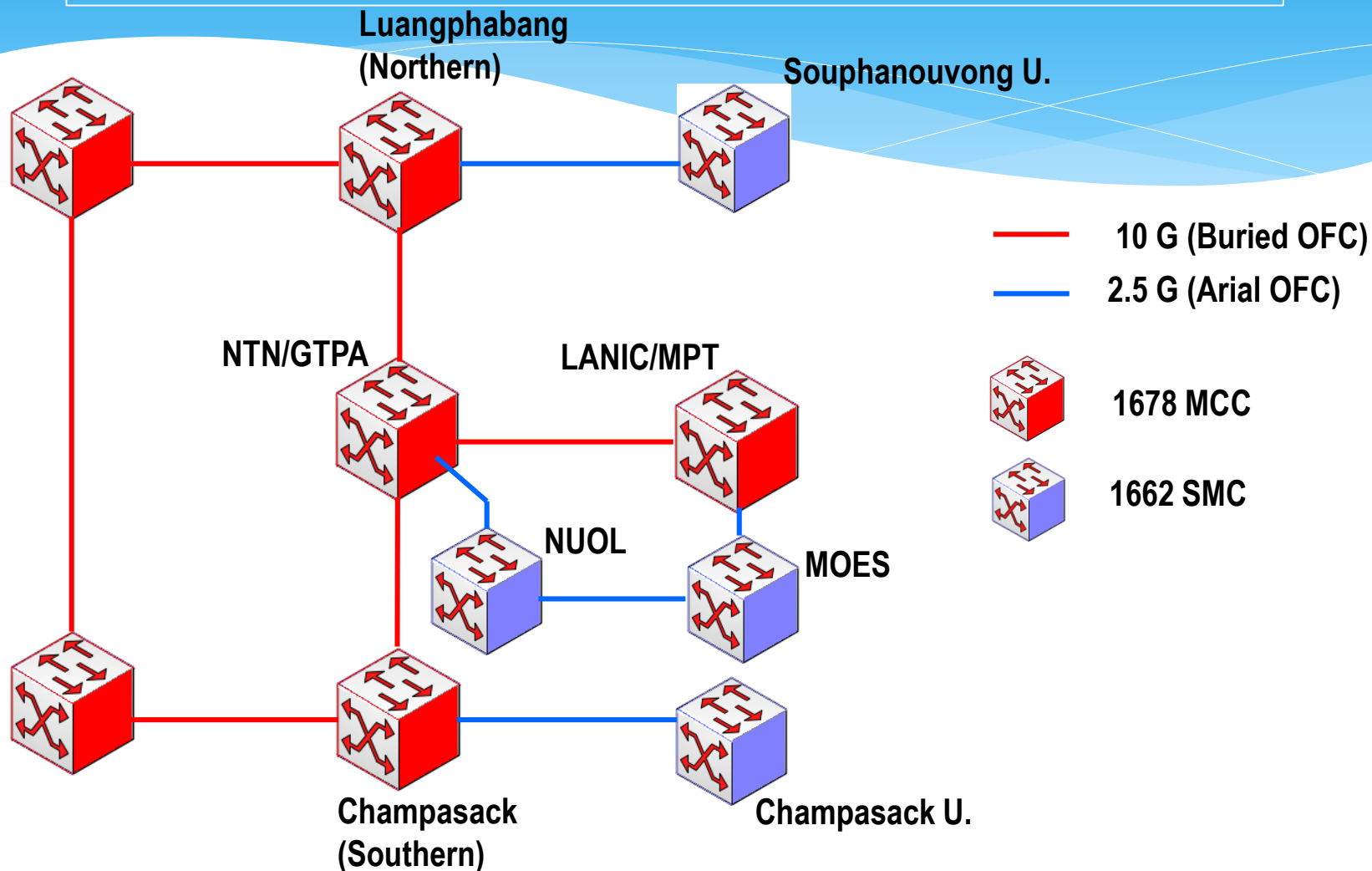
- ▶ **The needs of Bandwidth (For High resolution Media, Accessibility, ...)**
- ▶ **Network Security**
- ▶ **Collaboration on Human Research Development**
- ▶ **ASEAN Unity**
- ▶ **...**

HRD for Industry of ICT

- ▶ **e-Environment for modernization and Industrialization**
- ▶ **Quality of Human Resources**
- ▶ **...**

Others.

National Fiber Backbone connected to Education Sector (by LANIC)





Thank you !

ขอบคุณ !