

A large, stylized yellow star graphic that serves as a background for the main title text.

Trans Eurasia Information Network (TEIN3): towards a truly pan-Asian R&E network

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3rd SEACOOOP Cooperation Forum on eInfrastructures
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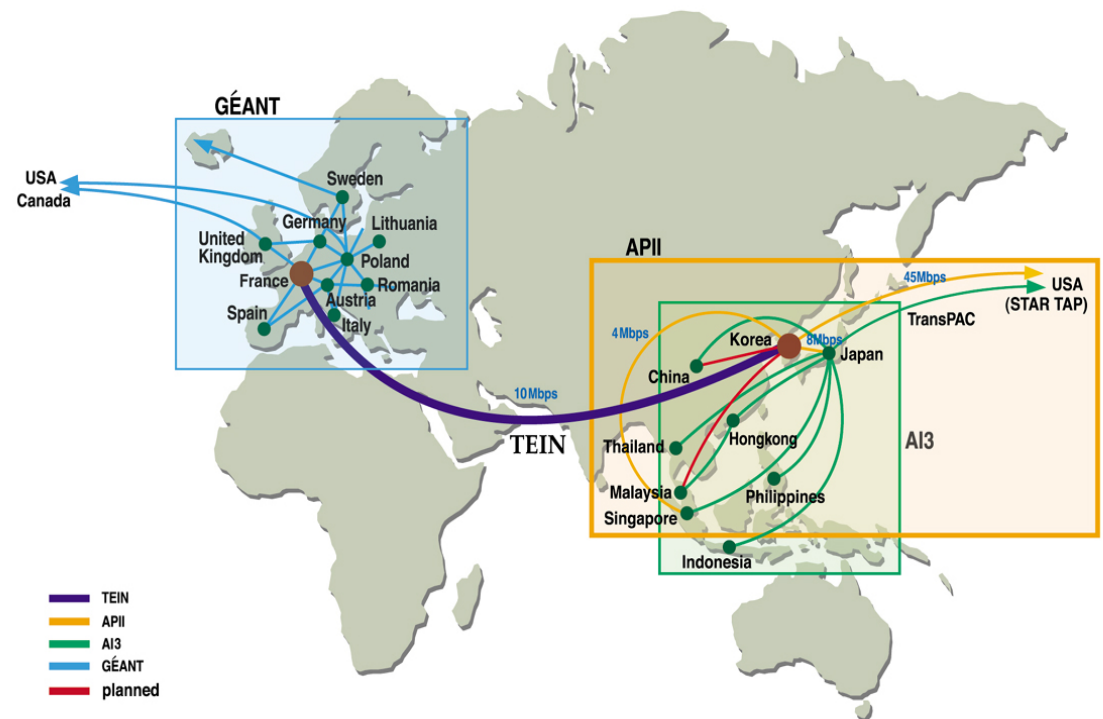
- Background and project history
- Achievements to date
- TEIN3 and SEA
- The Future



Where did it all start?



- Oct 2000 TEIN Initiative launched at ASEM3 Summit in Seoul, Korea
- Dec 2001 Bilateral FR-KR 2Mbps TEIN1 link installed (subsequently and gradually upgraded to 155 Mbps in Dec 2004)
- Sept 2003 EU 10M € funding announced to assist the developing countries



The Task:

- Deploy cost-effective electronic network between Asian ASEM partners' R&E communities (dedicated connectivity restricted to non-commercial use)
- Directly link Asian and European R&E communities
- Stimulate collaborative working and research
- Create conditions for sustainability



The Challenge:

- 'Digital Divide' between developed and developing Asian countries
- High telecoms costs in developing markets
- Limited national R&E networking and NREN development in developing countries
- Indirect R&E Asia/Europe Internet links
- Little R&E collaboration between Asian countries and with Europe



The Method:

Combining EC funding, DANTE Know-how and Asian Co-operation!

- Deploying European cooperative model in Asia
- Effective management, gained from previous regional programmes – Latin America (ALICE), southern Mediterranean (EUMEDCONNECT)
- Strong collaboration between Asian partners



Major milestones



May 04

Feasibility study for TEIN2
DANTE appointed to manage TEIN2

Jan 06

TEIN2 network operational

Sep 06

Official launch of TEIN2 at ASEM 6, Helsinki

May 08

Feasibility study on network extension to South Asia begins

Oct 08

Recognition of TEIN2's achievements and announcement of TEIN3 at ASEM 7, Beijing

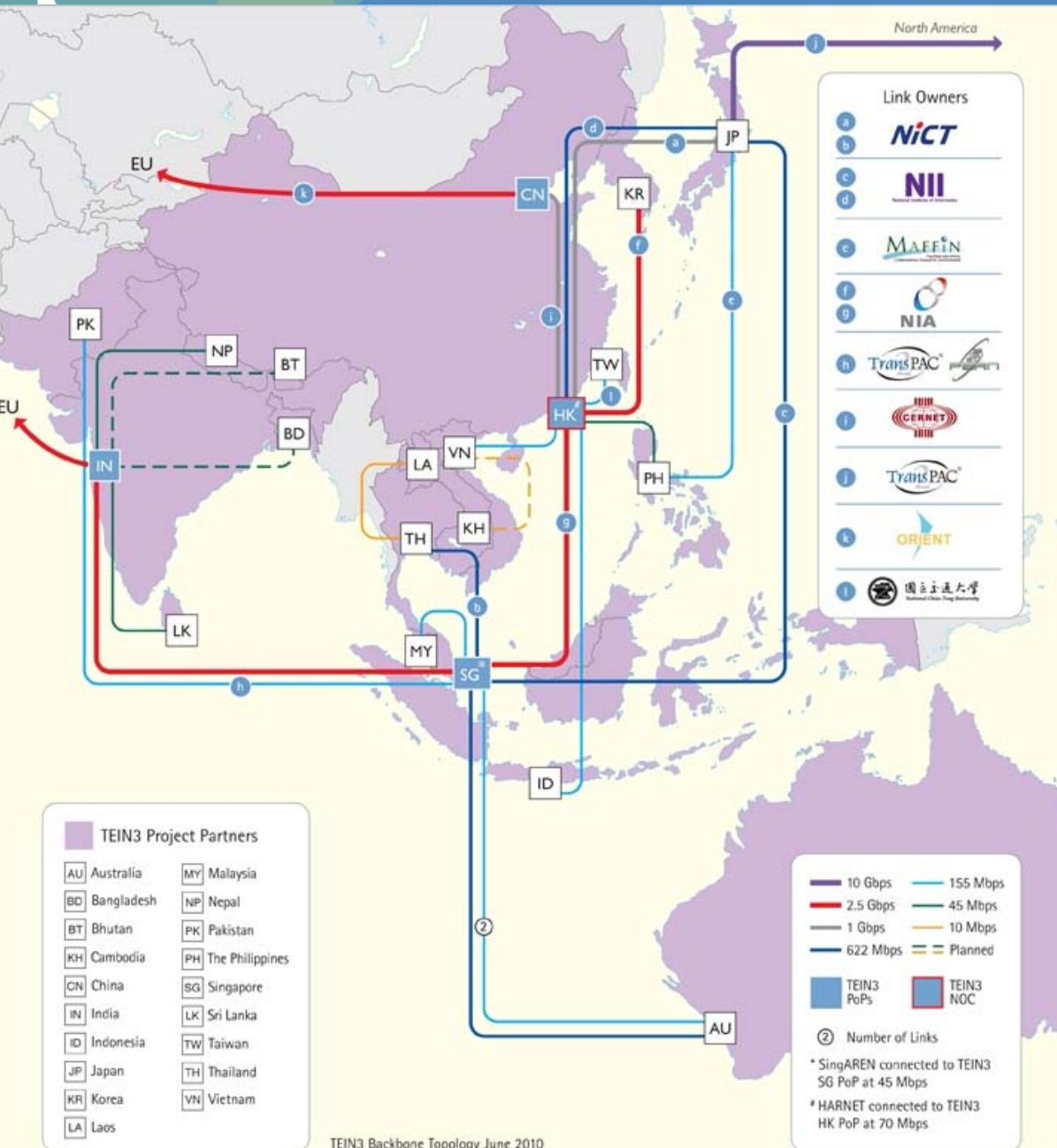
Dec 08

TEIN2 successfully completed
TEIN3 enters service

Dec 09

TEIN3 extended to South Asia





2009 Dec TEIN3

extended to South Asia:

13 beneficiary partners (BD, BT, KH, IN, ID, LA, MY, NP, PK, PH, LK, TH, VN)

6 non-beneficiary partners (AU, CN, JP, KR, SG, TW)

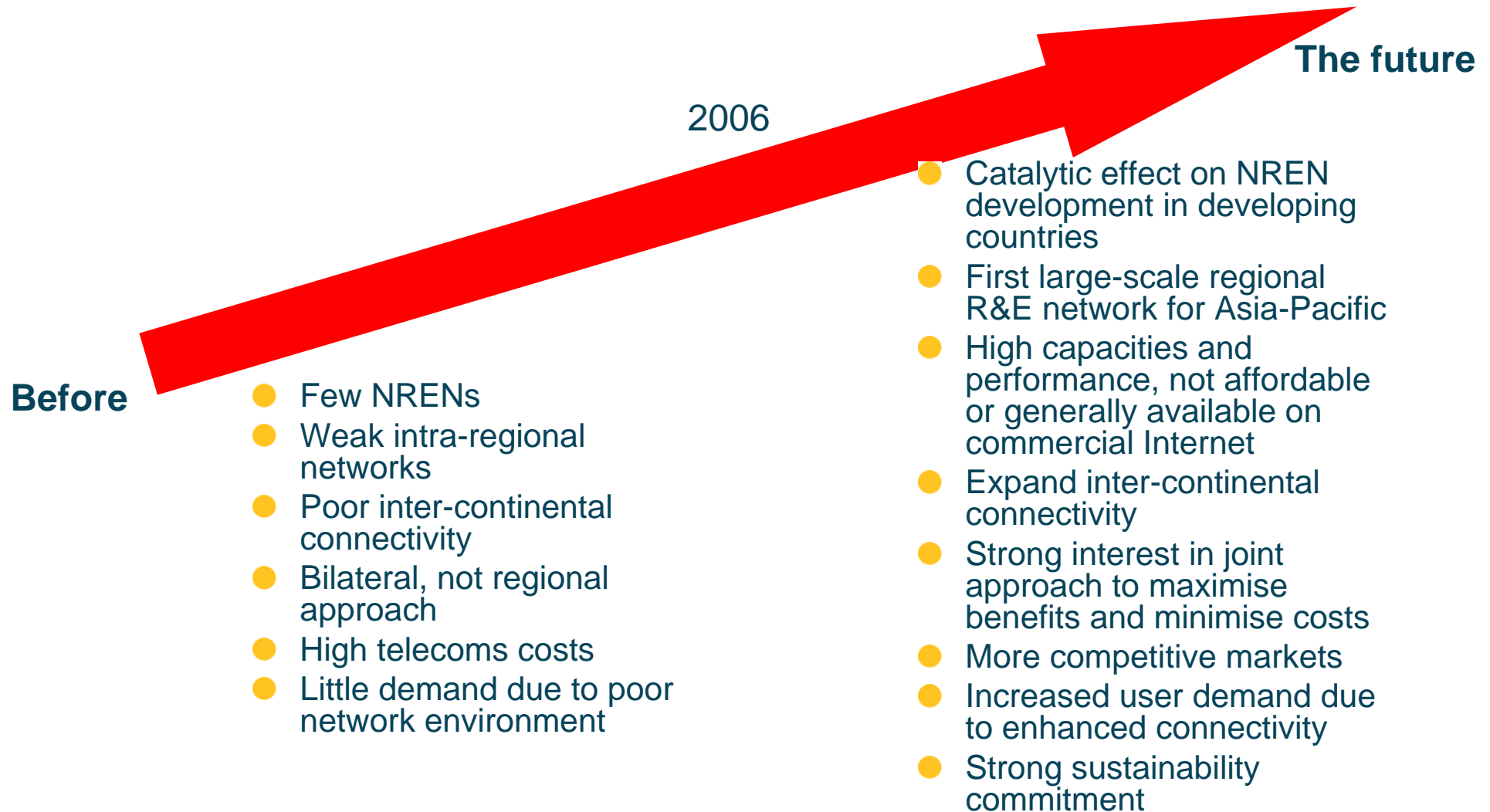
45M connected users

4 network hubs

11.4M Euro EC funding
(65% co-funding)

Transition to Asian ownership
underway

Achievements and lessons: Before and after TEIN2/3



★ TEIN3 saves lives

TEIN3 allows accurate typhoon forecasting and life-saving weather warnings through timely transfer of meteorological data from Germany to the Philippines.

★ TEIN3 fights hunger

TEIN3 helps farmers grow crops with greater yields and disease resistance by allowing researchers to develop new varieties and analyse growing conditions faster.

The third generation of the Trans-Eurasia Information Network (TEIN3) provides a dedicated high-capacity Internet for over 45 million researchers and academics in 18 countries across Asia-Pacific.



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the research and education network for asia-pacific



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and education network for asia-pacific

★ TEIN3 trains doctors

TEIN3 allows surgeons at their hospitals to learn complex clinical techniques from world experts through interactive remote training.

★ TEIN3 tackles wildfires

TEIN3 helps get the right information to the right people to detect dangerous hotspots and track active wildfires in Indonesia

The third generation of the Trans-Eurasia Information Network (TEIN3) provides a dedicated high-capacity Internet for over 45 million researchers and academics in 18 countries across Asia-Pacific.



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work for asia-pacific

Enabling applications is TEIN3's key driver



World Bank GDLN v/c
20 July 2010:

- 1st GDLN conference bridged within South Asia (at LEARN via TEIN3)
- Included sites in Bhutan, Bangla Desh, Pakistan, Sri Lanka, EU and US

“I was mesmerized at the clarity of the NREN and TEIN connected sites”

Michael Foley, World Bank

“The not-so-good quality of video received by the participants who were connected through commodity Internetwas largely due to the fact that our commodity Internet link is congested at this time.”

Nimal Ratnayake, LEARN



TEIN3 & GÉANT: Bringing cultures together across continents

★
TEIN3



**Musicians in Stockholm
with live link to dancers
in Kuala Lumpur
1 December 2010**



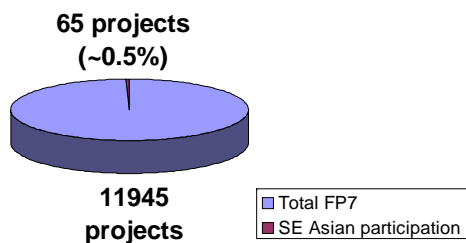
- Possible further phase of EC funding
- EC wishes to contract its TEIN4 funding with the Asian organisation (TEIN*CC) that has taken on responsibility for the TEIN programme
- Focus on assisting developing countries not yet connected



There is still mileage...

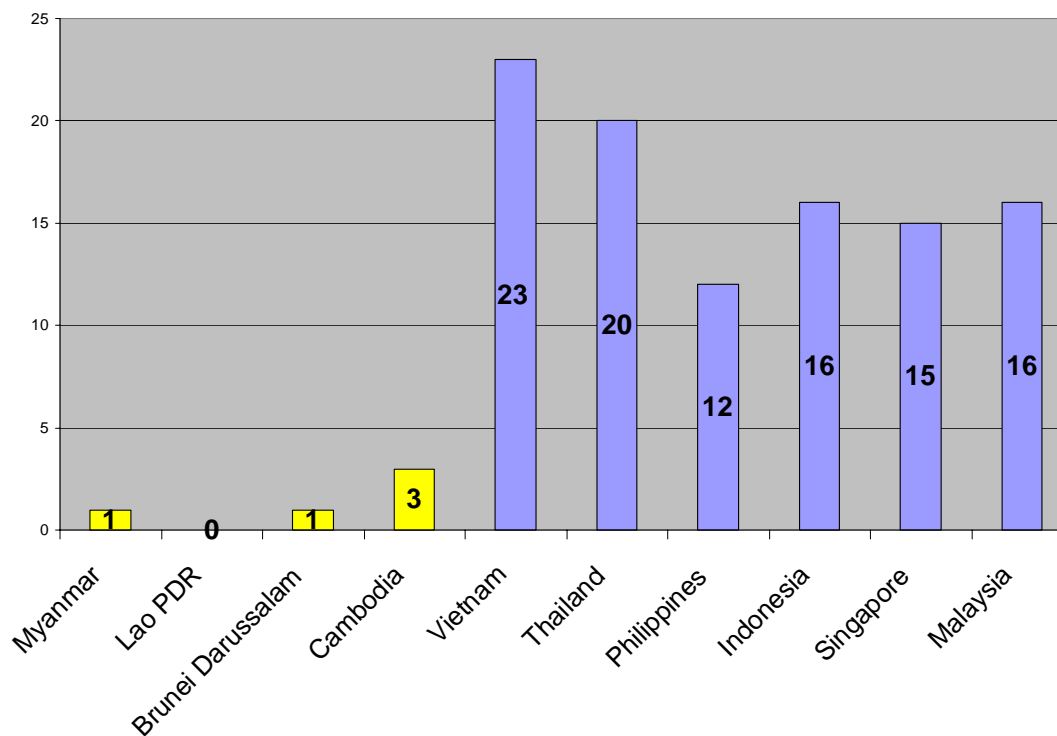
- Not a truly pan-Asian network yet: could still be extended to SEA countries
- EU-SEA collaboration could be increased

SE Asian participation in FP7 projects



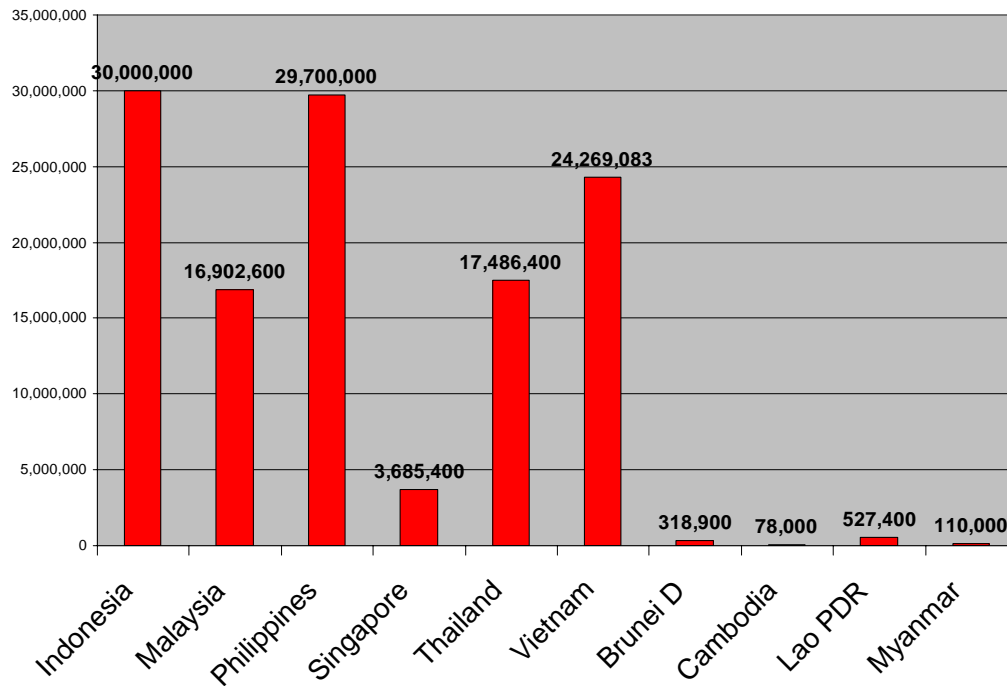
Source: CORDIS
Aug'10

Distribution of FP7 projects across SE Asian countries

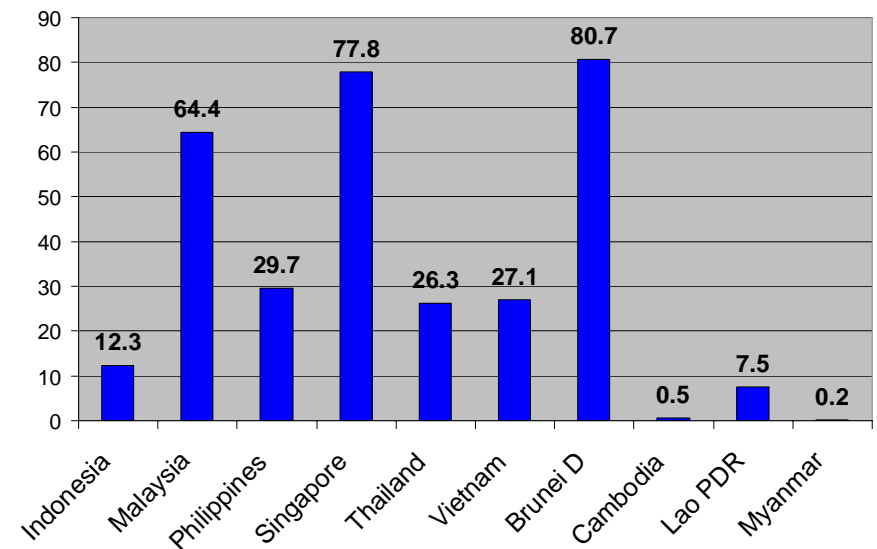


...and there is potential

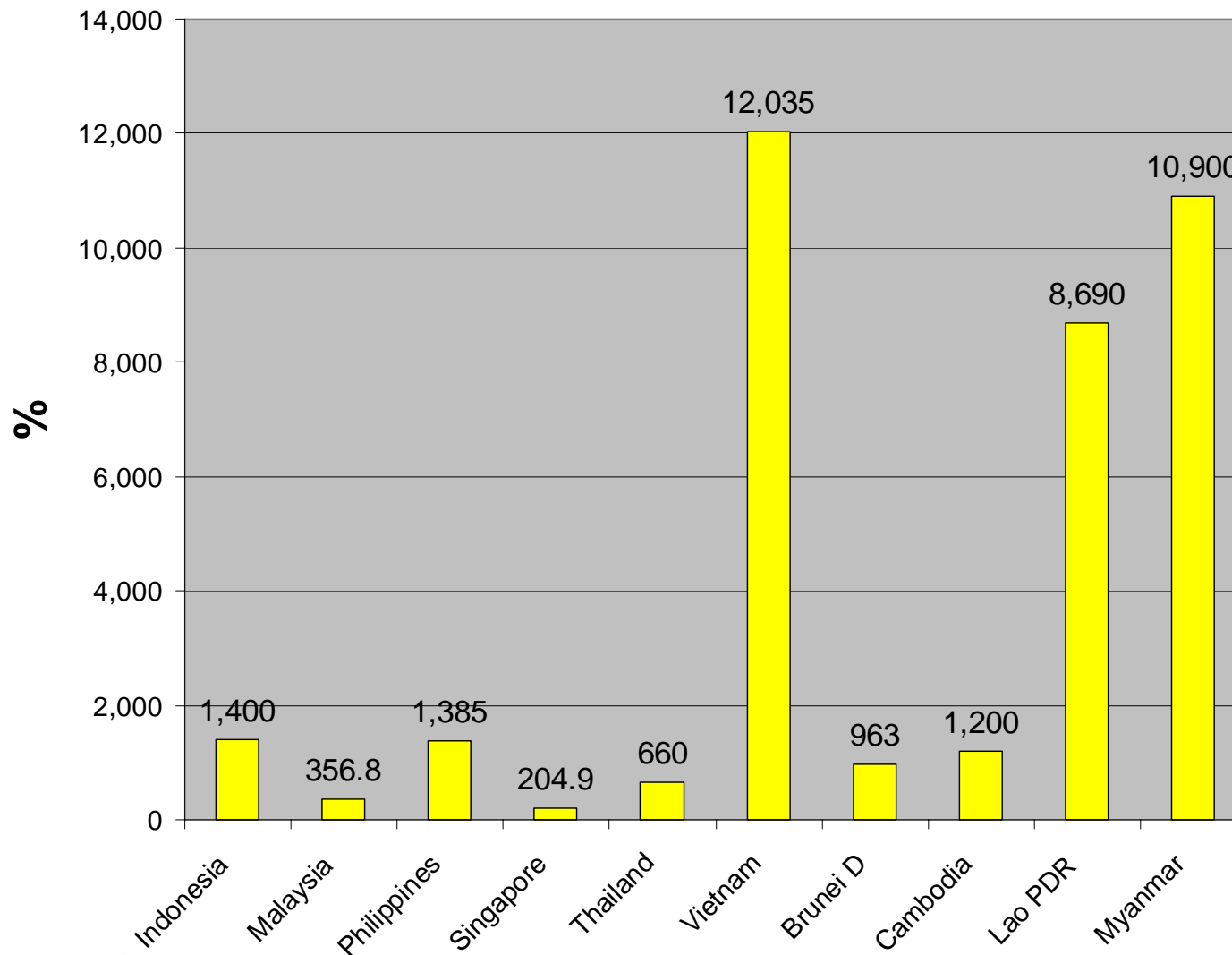
Internet users (source ITU 2009 data)



Internet penetration (% Population) - source ITU 2009 data



Internet user growth (2000-2010)



Source: ITU



Unconnected countries

- *“Without updated eInfrastructures and TEIN3 connection, no effective international collaboration can take place” (Brunei)*
- *“I-Cube (International Consortium of Universities for Bio-Diversity and Environment) will create large amounts of data that will need to be distributed among geographically dispersed partners” (Brunei)*
- *“Connectivity costs are too high” (Cambodia)*

Connected countries

- *“TEIN3 offers a single link connectivity to international partners with hardly any congestion” (Malaysia)*
- *“Critical data and information is easily accessible and exchangeable without digital divide constraints” (Indonesia)*



Thanks for your attention!

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