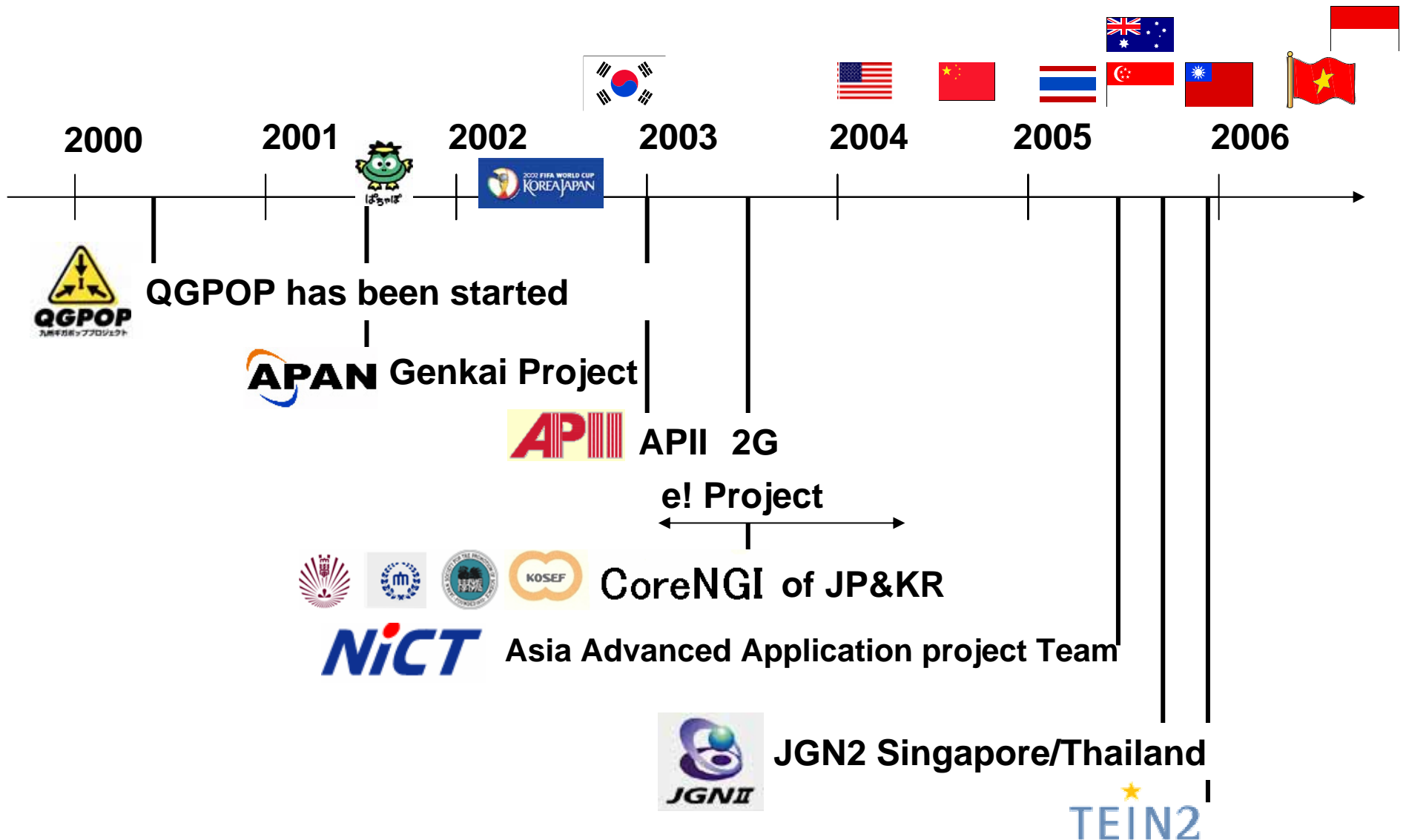


Case Studies of Education and International Collaboration on the Cyber Infrastructure

Koji OKAMURA
Kyushu University

Abstract of our International activities



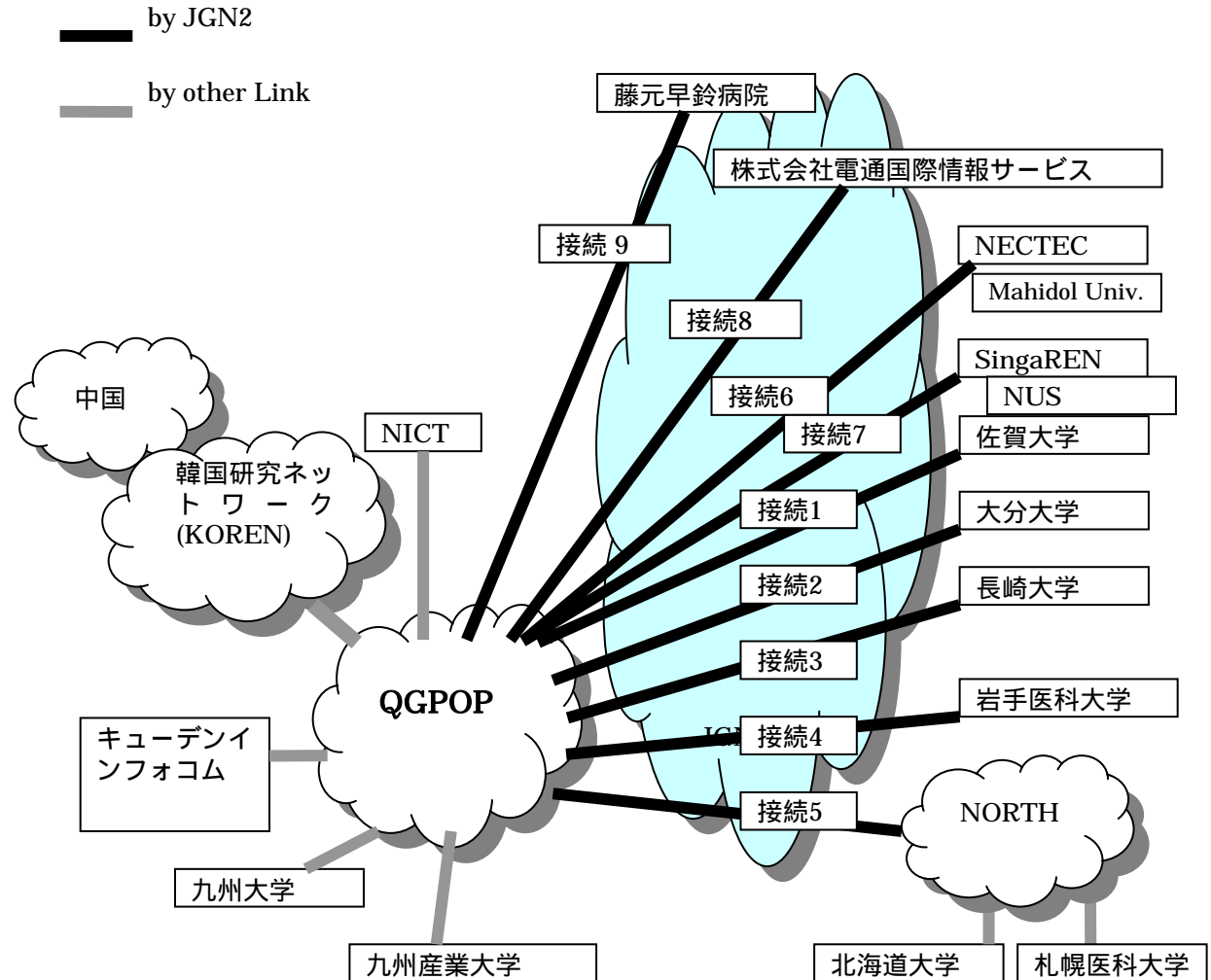


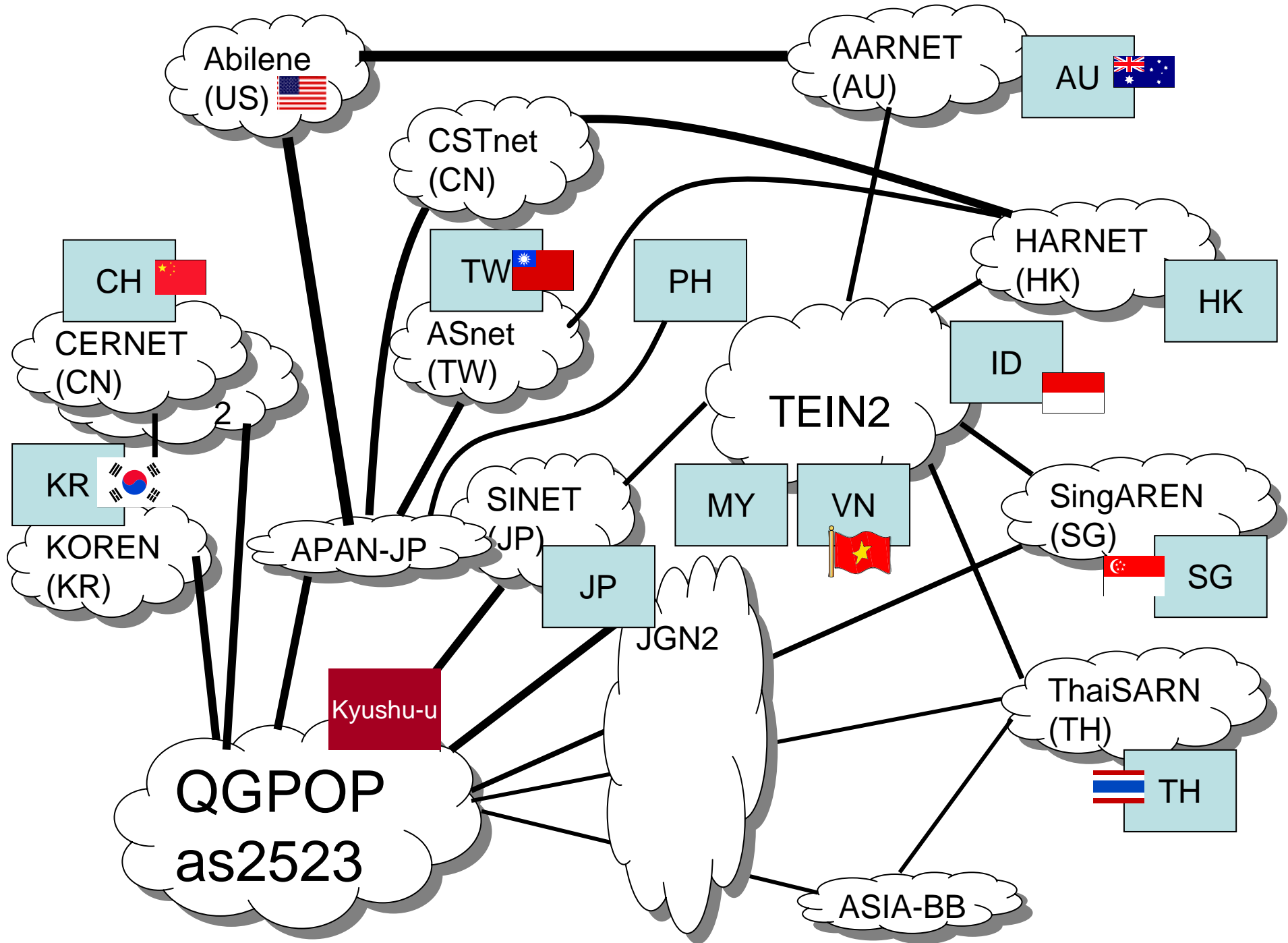
APAN: Asia Pacific Advanced Network



QGPOP: Researches on Advanced International Collaborations over High Speed Internet: JGN2-A17005

1. 九州大学
2. 九州産業大学
3. キューデンインフォコム
4. 独立行政法人 情報通信研究機構
5. 佐賀大学
6. 長崎大学
7. 大分大学
8. 特定非営利活動法人 北海道地域ネットワーク協議会
9. 北海道大学
10. 札幌医科大学
11. 岩手医科大学
12. NECTEC
13. Mahidol University SingaREN
14. NUS, National University of Singapore
15. 株式会社電通国際情報サービス
16. 藤元早鈴病院



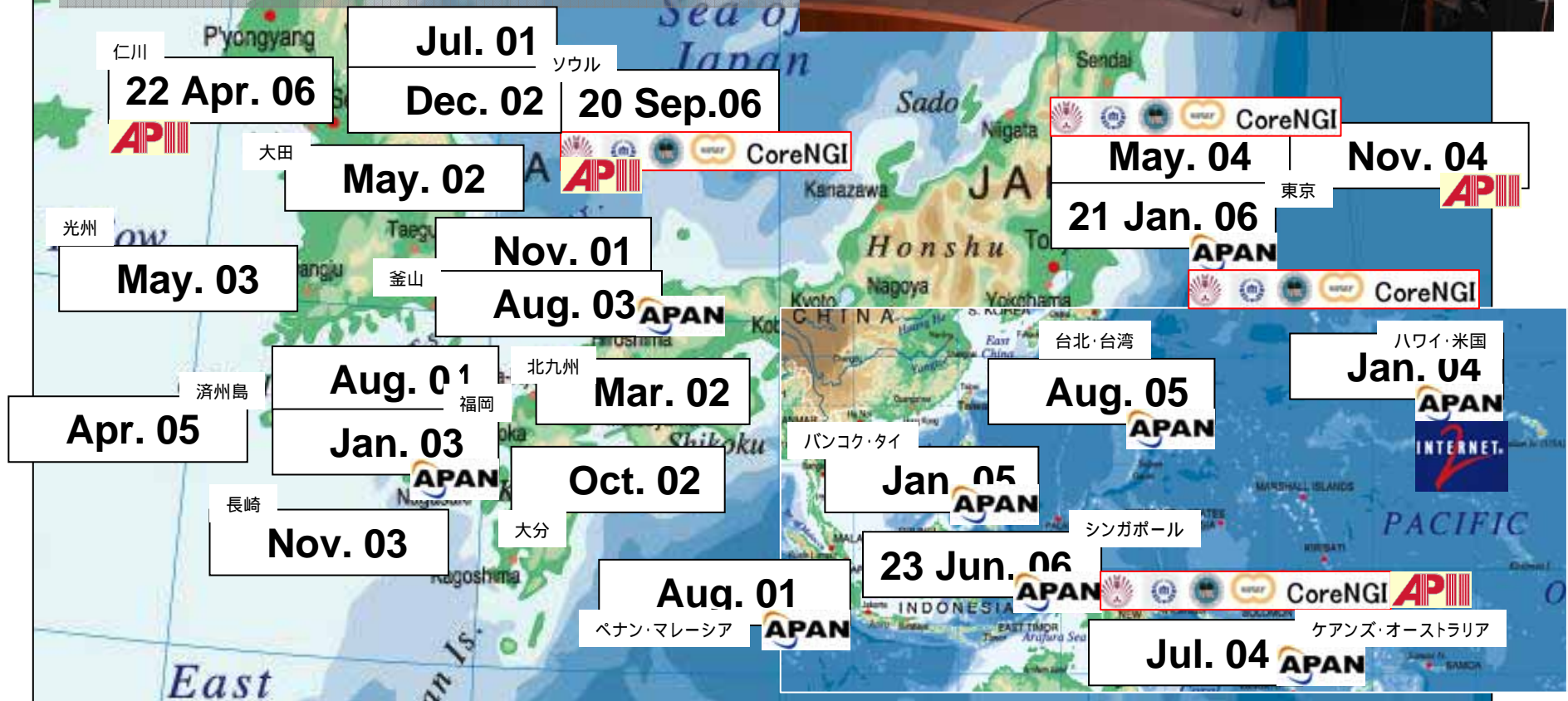


Genkai Project

A Community

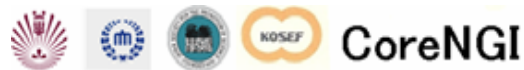
- ・ Human Exchange
- ・ Project Exchange

2001年 2002年 2003年
 2004年 2005年 2006年



JSPS Core Program

Development and Operation of the NGI 2003-



岡村 @ 九大



2003年11月 第4回セミナー
韓国・大田 学振163委員会(ITRC)と共同開催



2006年1月 第6回セミナー
APAN 東京と共催、APANにも40名以上の韓国人研究者が参加

参加機関:

九州大学、早稲田大学、九州産業大学、長崎大学、大分大学、佐賀大学、宮崎大学、京都大学、国立情報学研究所、東京大学、大阪大学、慶応大学、九州工業大学、広島大学、広島市立大学、情報通信研究機構、筑紫女学園大学、北海道大学、九州情報大学、長崎総合科学大学、忠南大学、韓国科学技術大学校、ソウル大学校、高麗大学校、漢陽大学校、慶北大学校、慶熙大学校、全南大学校、韓国情報通信大学校、光州科学技術院、成均館大学校、梨花女子大学校、建国大学校、済州大学校、国立癌センター、韓国科学技術研究院、忠北大学校、順天郷大学校、慶南大学校、韓国先端網協会、釜慶大学校、釜山大学校、全北大学校、世宗大学校、慶尚大学校

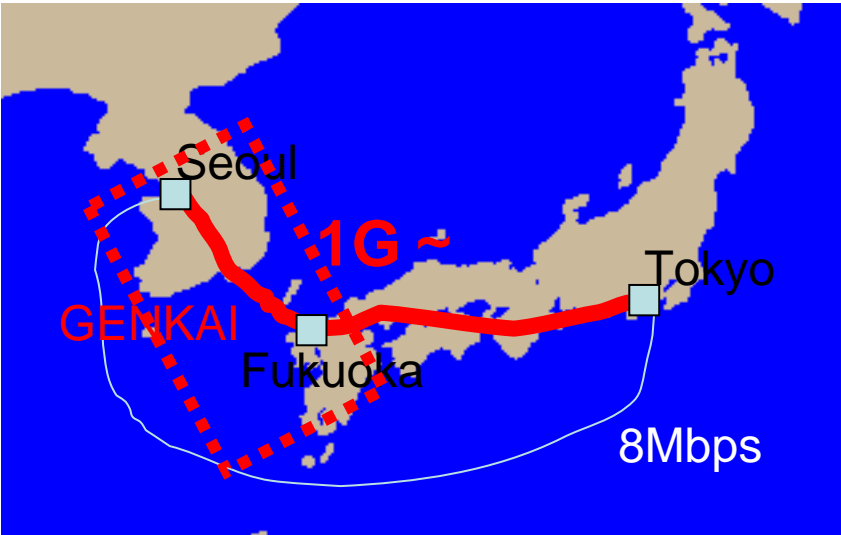
	2003	2004	2005
日本人 (人/人・日)	63/263	78/287	73/306
韓国人 (人/人・日)	64/325	75/310	71/283

2006.5.30

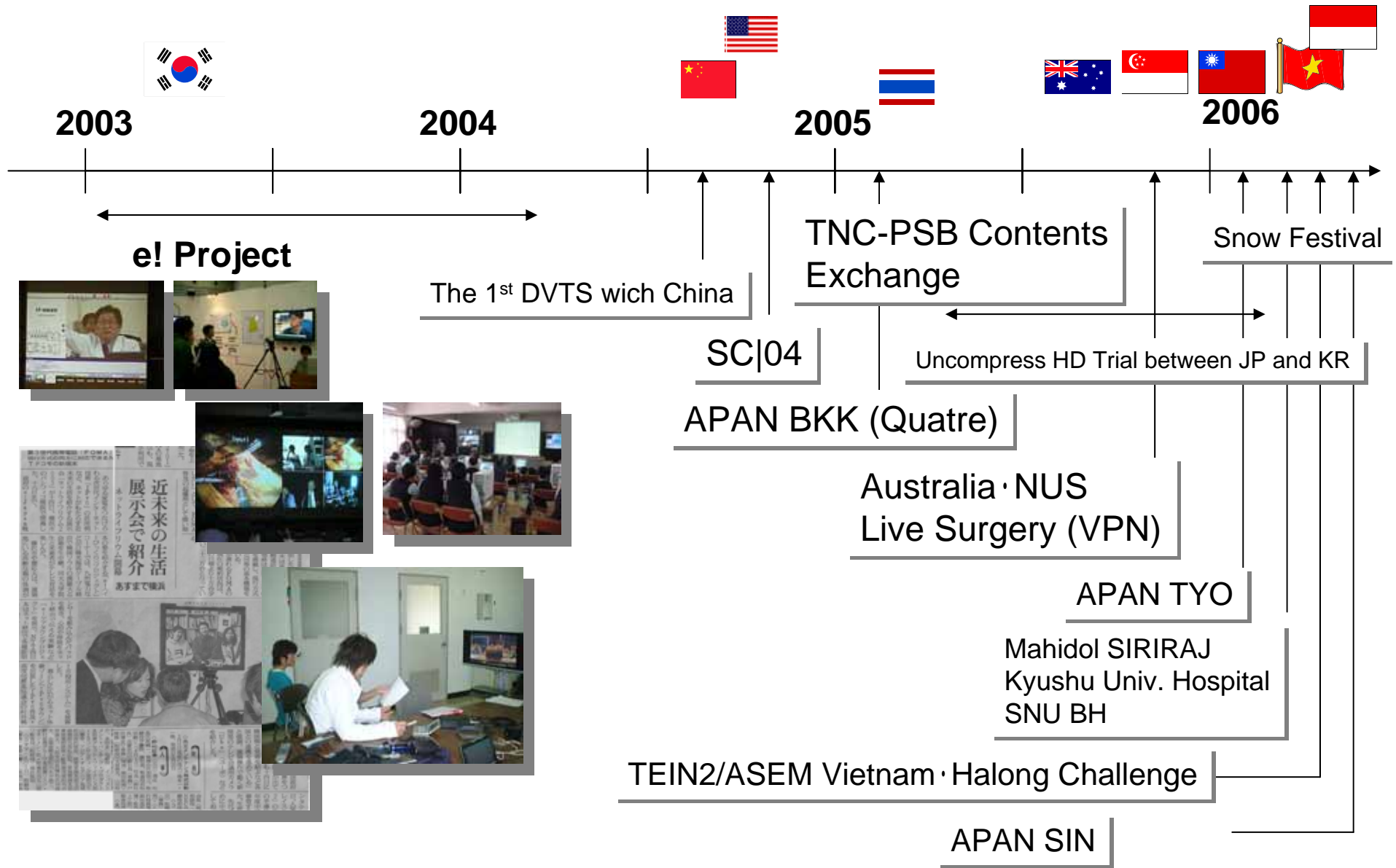
APAN 10周年記念講演会

日韓合計で、のべ150名程度の研究者が、年間600日くらい毎年交流し、次世代インターネットの共同研究を行っている。

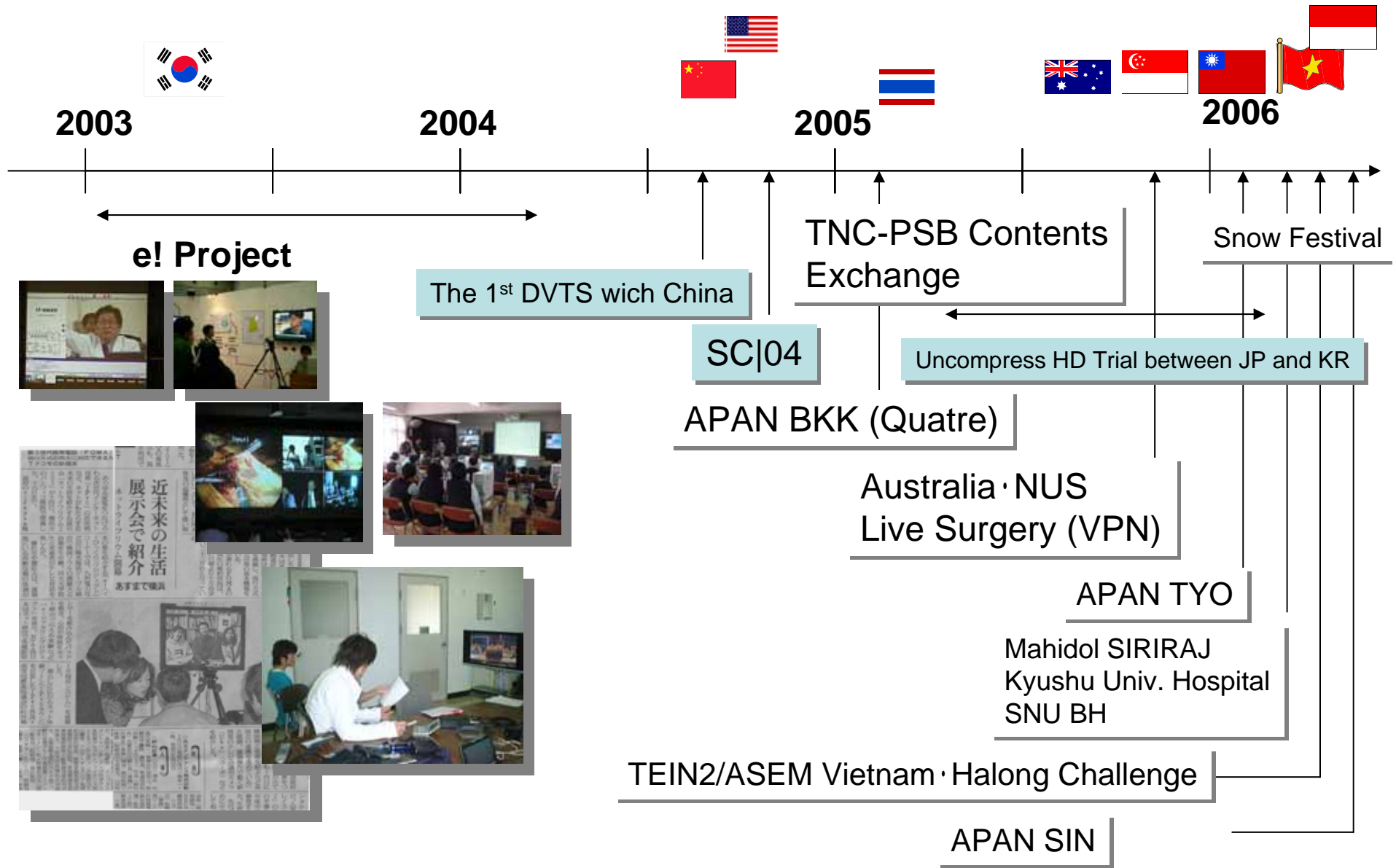
APII/Genkai/QGPOP



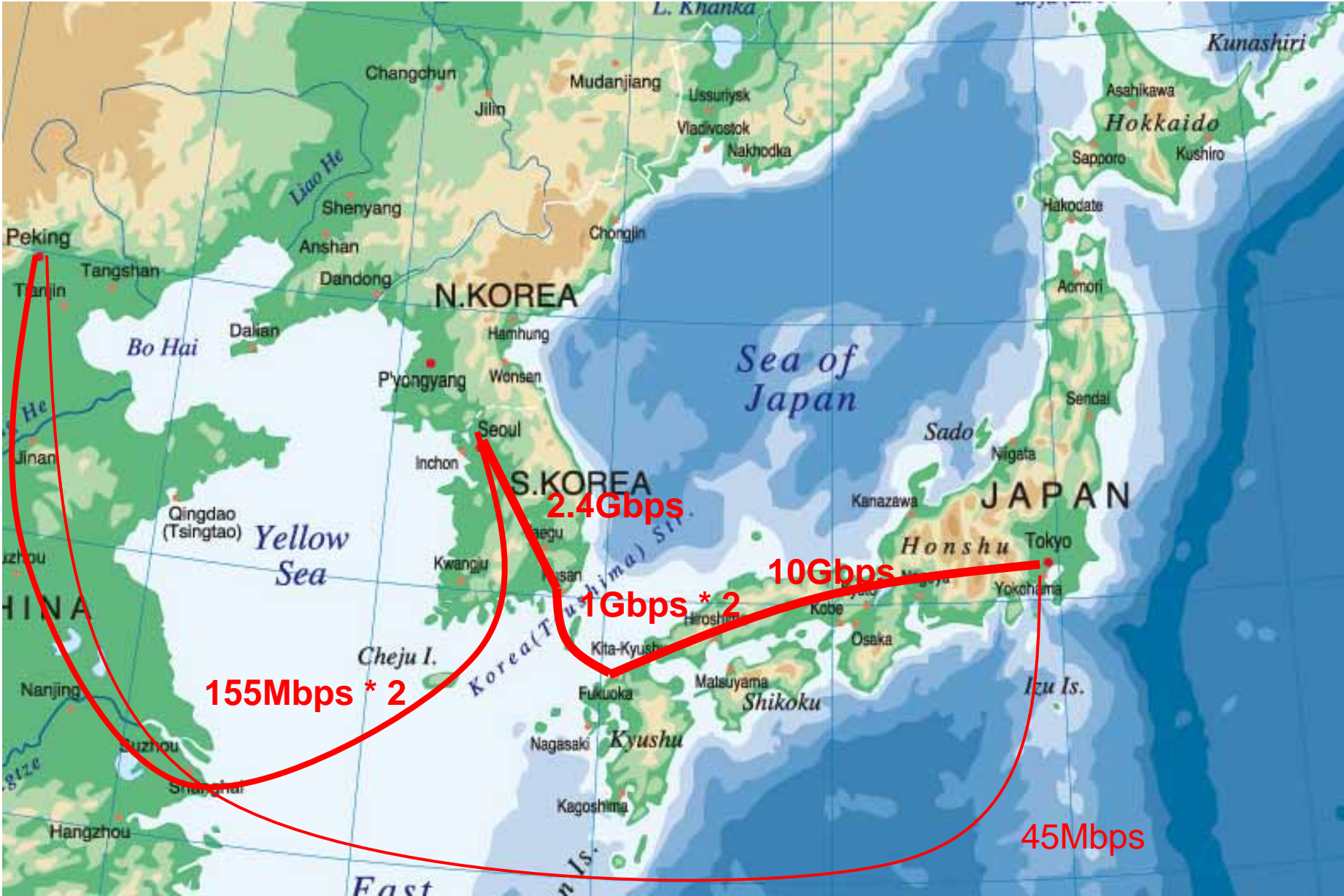
High Right of our International Case Studies



High Right of our International Case Studies

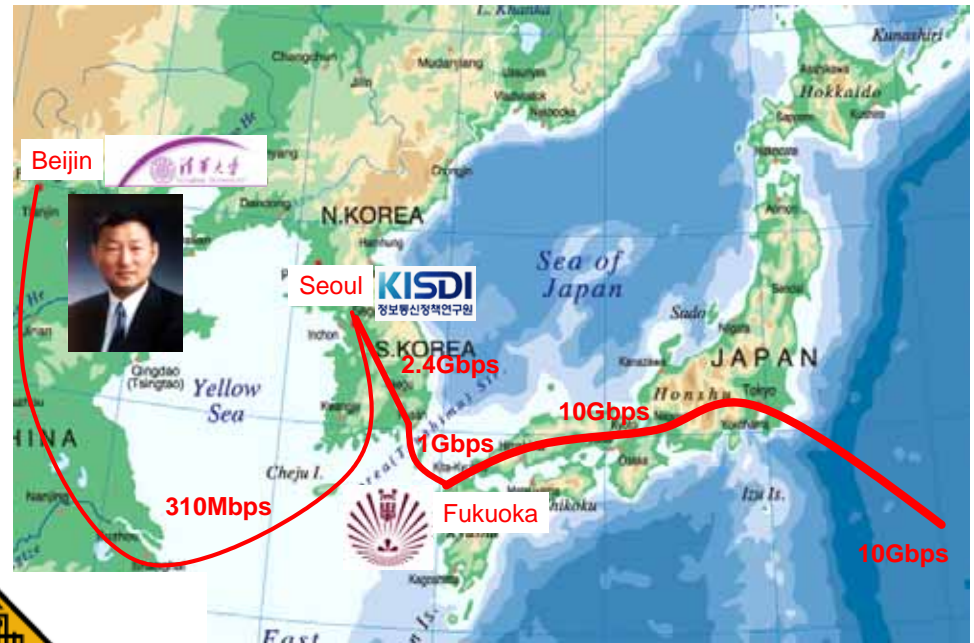


The Current Advanced Internet of CJK (after 2004)



Medical Experimentation between JP and CN

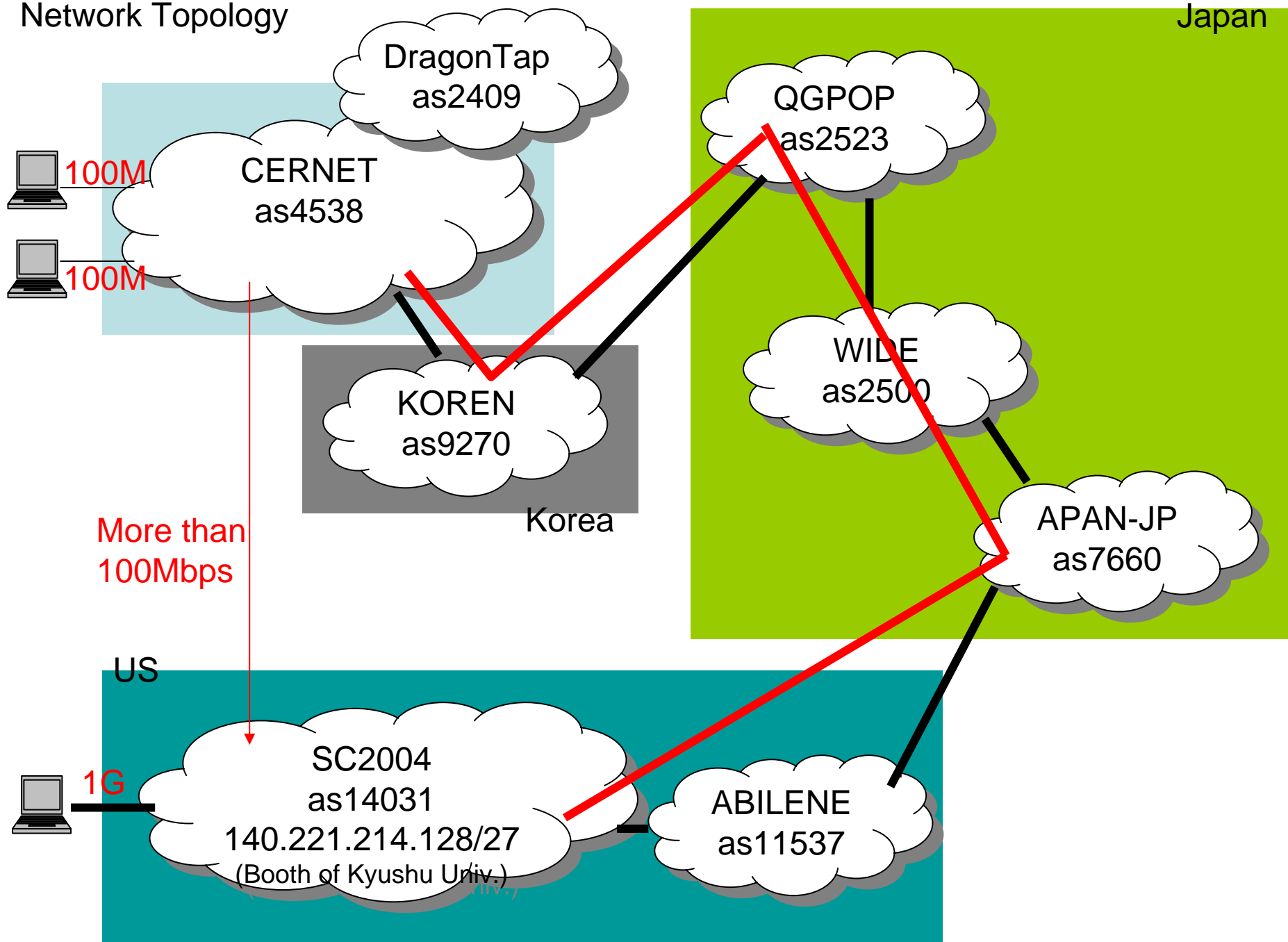




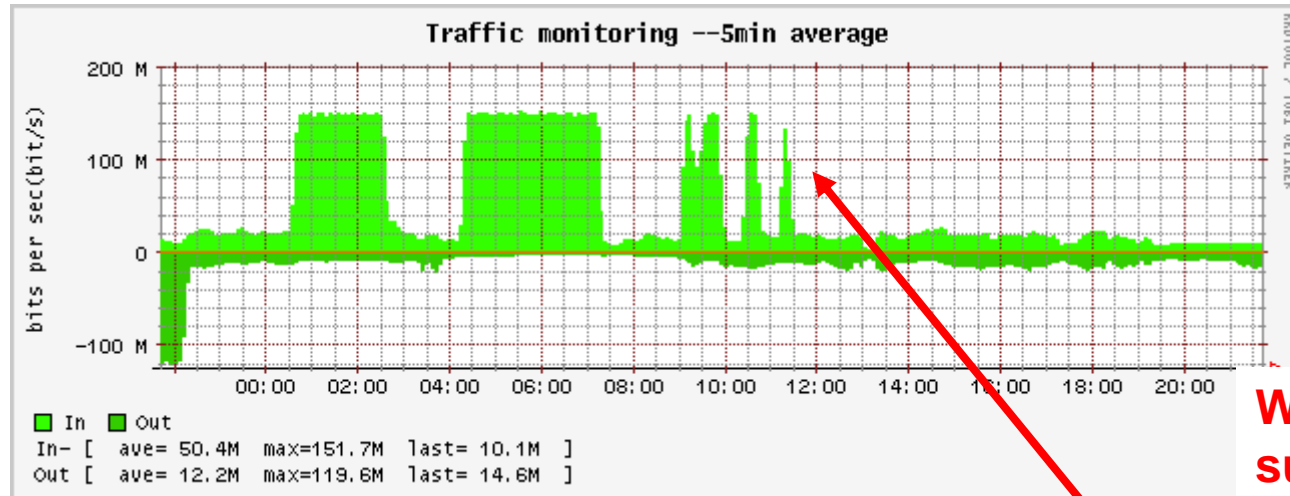
PITTSBURGH PA NOVEMBER 6 - 12



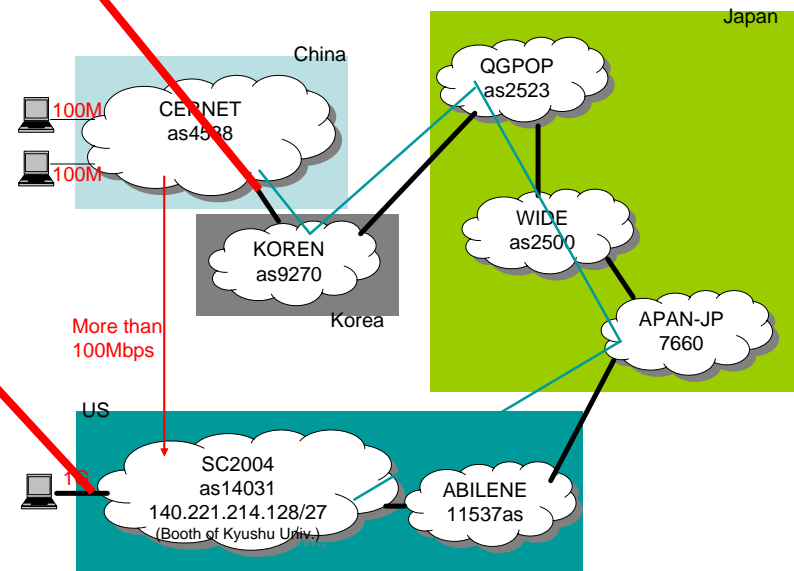
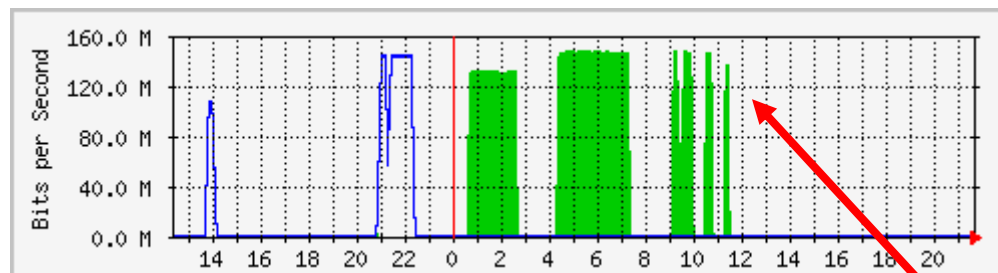
Network Topology



The Result of BWC (9th Nov. 2004)



We showed that we surely got 140Mbps from China to US.

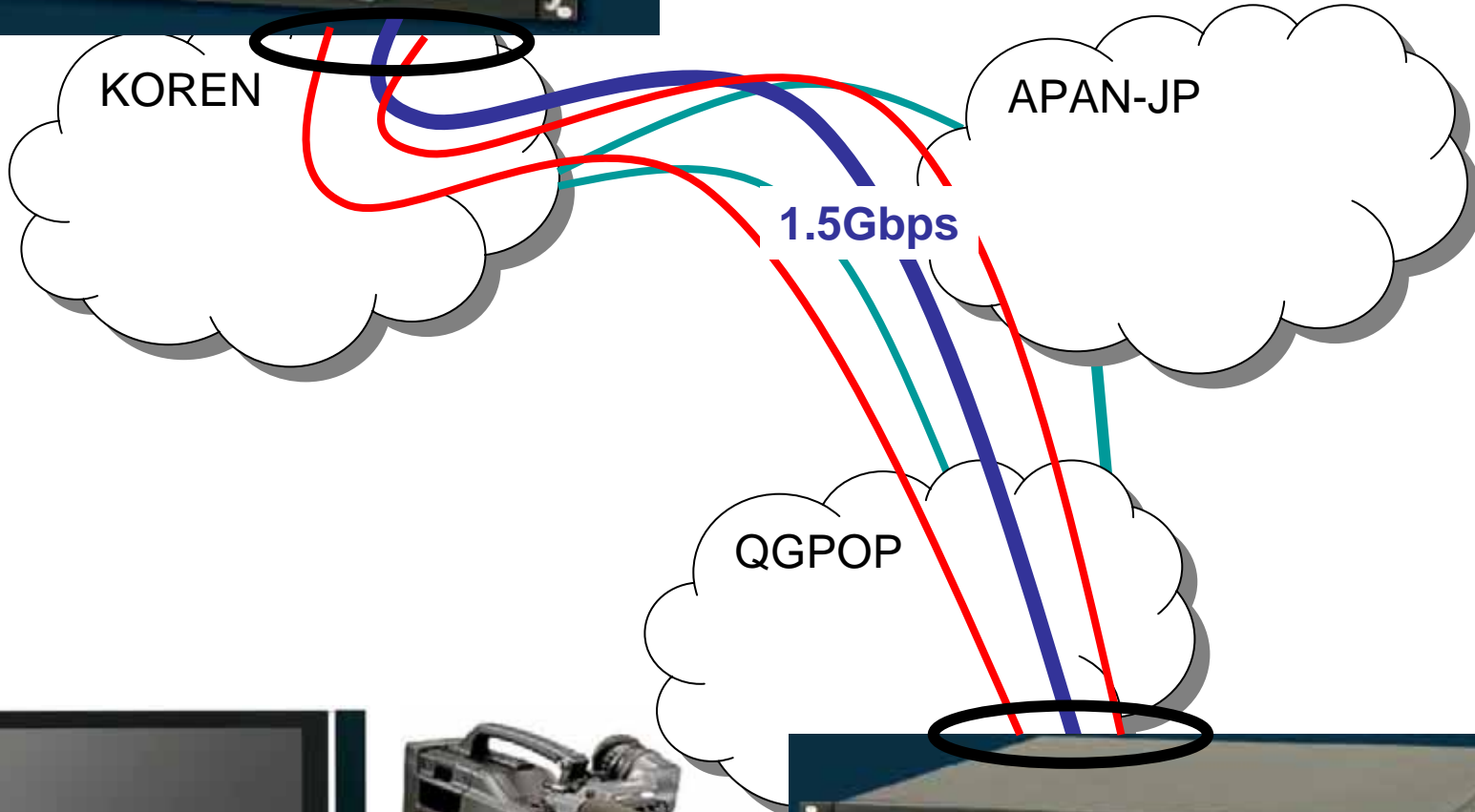


Entry name: Showing Bandwidth of CJK (China, Japan, Korea)

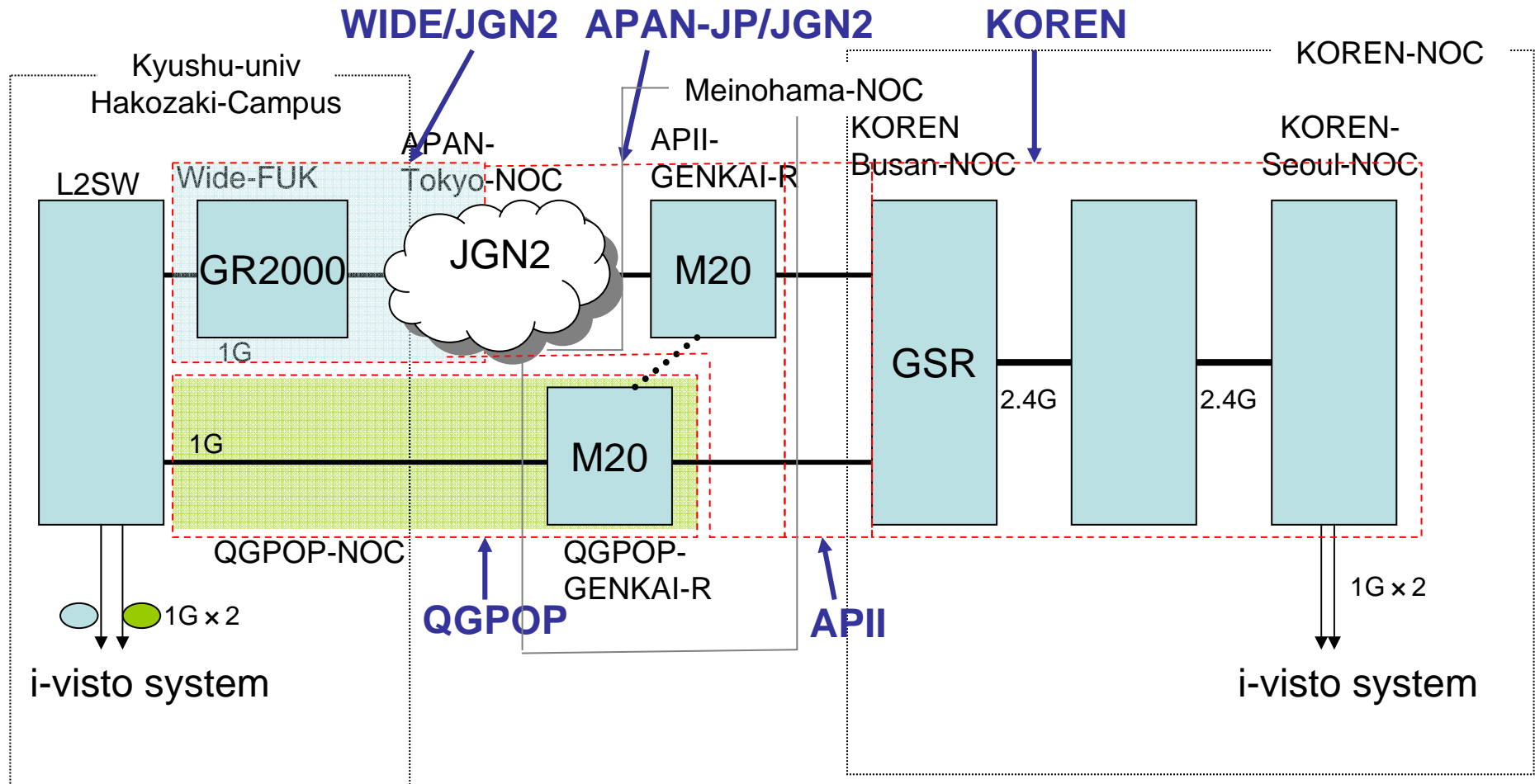
Organization: Kyushu University and KISDI

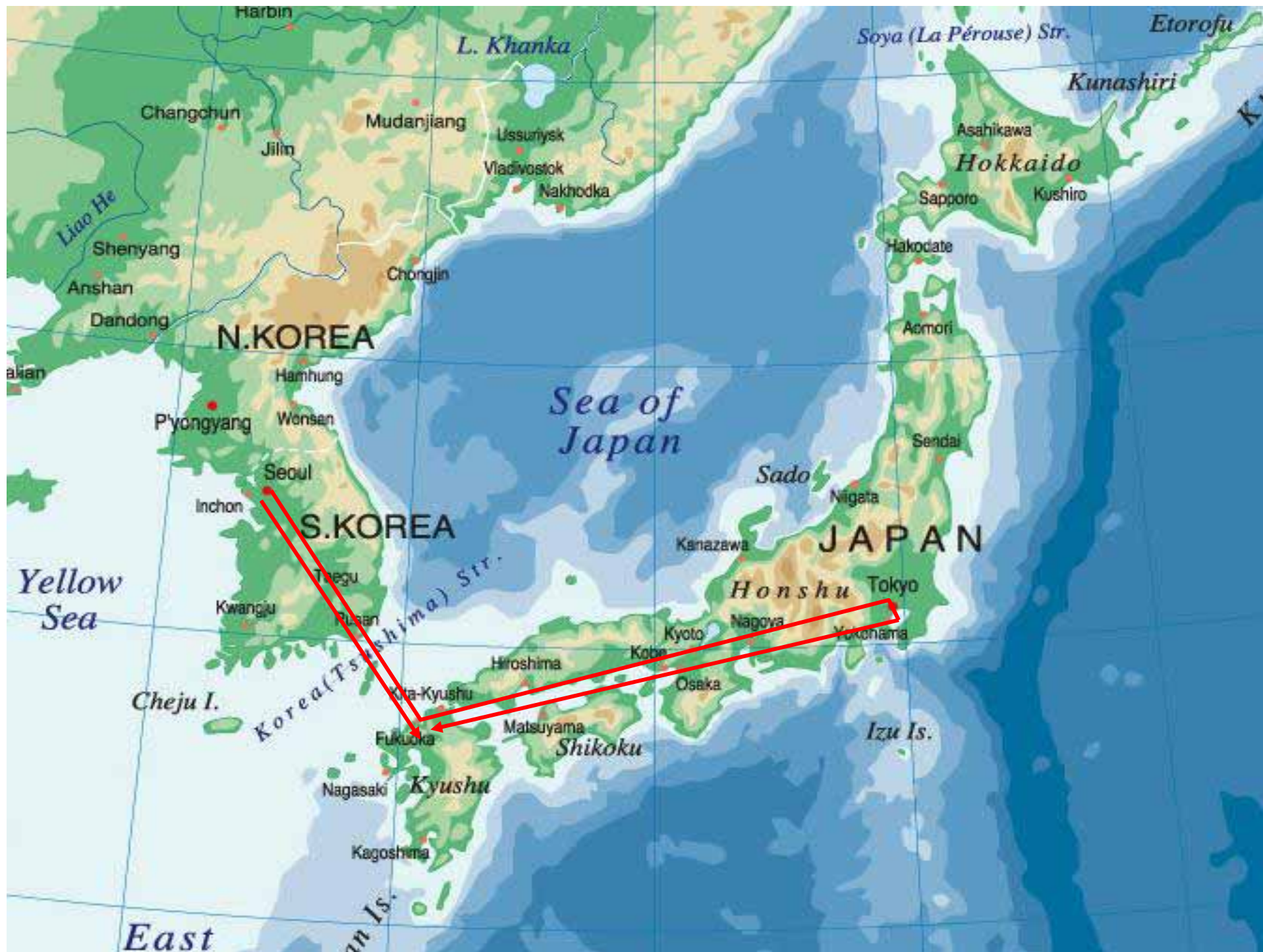
Award: Honorable Mention, Breaking Not Only Technical But Cultural Boundaries

Case study of 1.5Gbps
un-compressed HD Streaming between
Japan and Korea

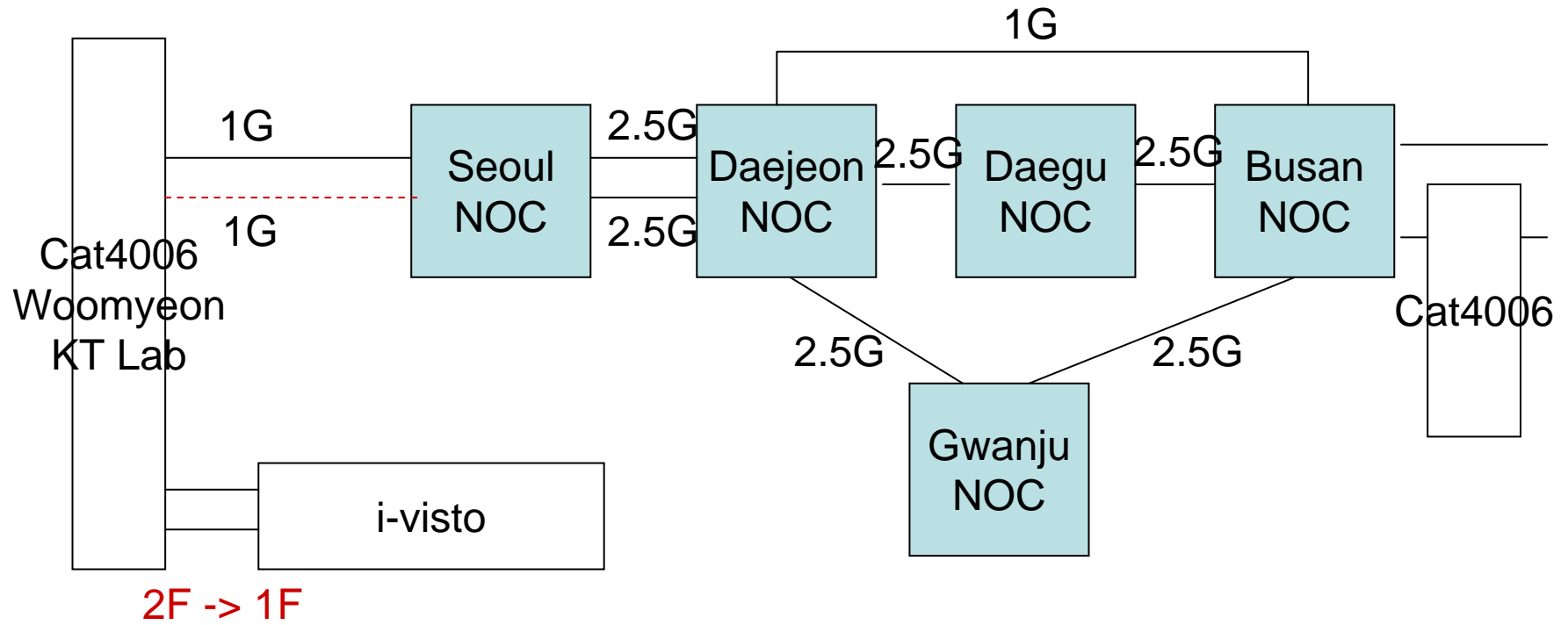


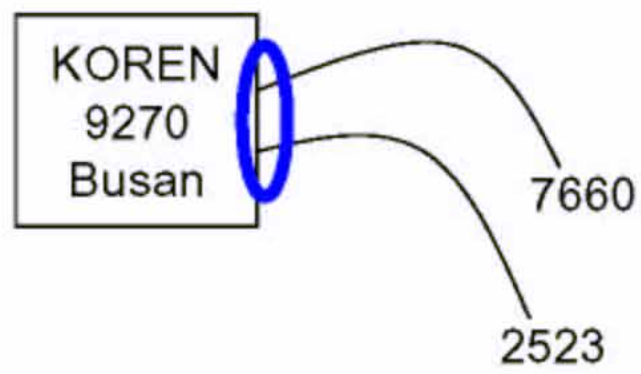
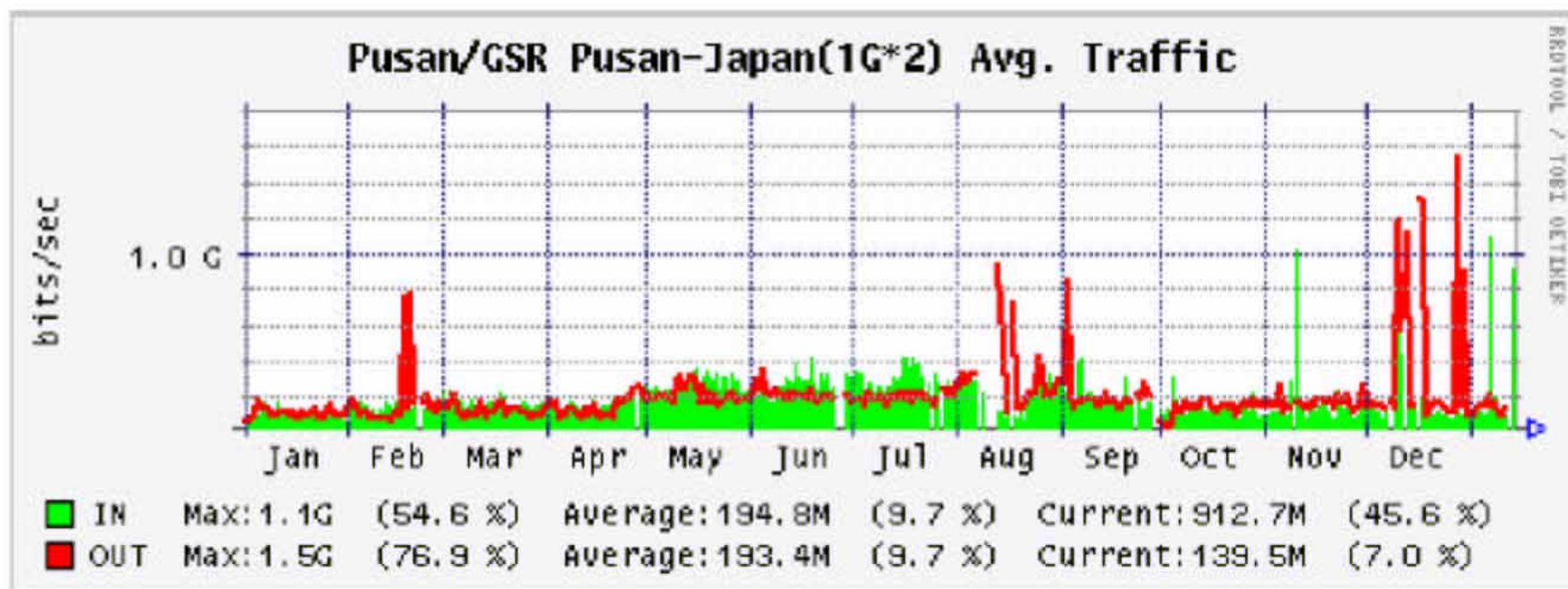
Network Environment



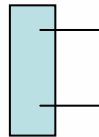


Korea Side

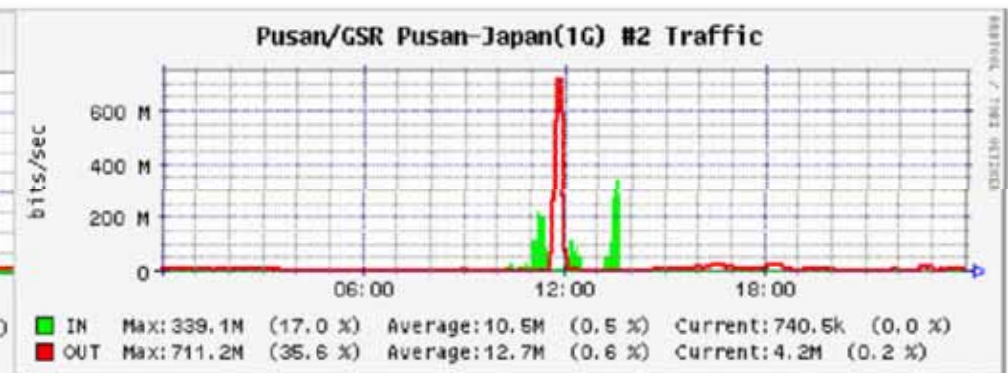
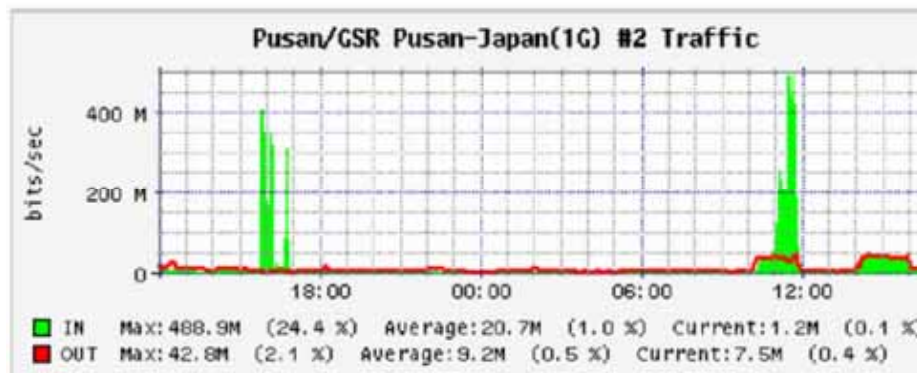
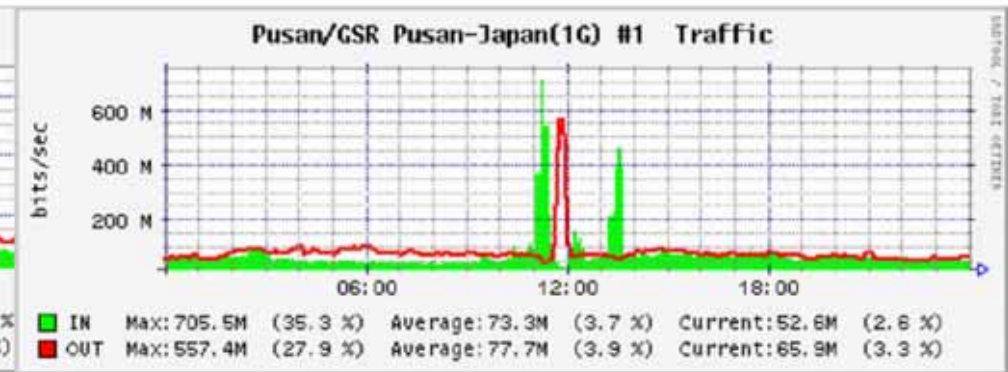
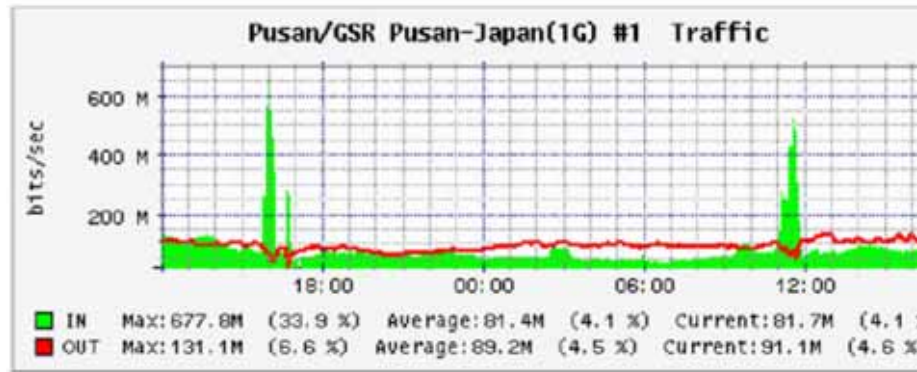
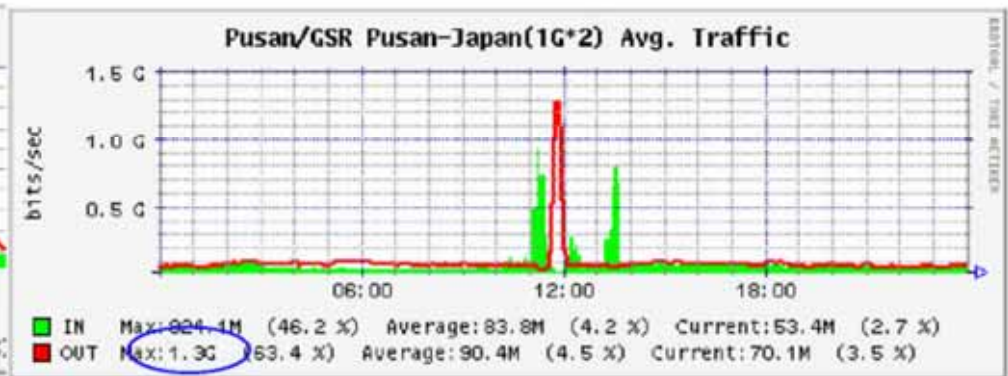
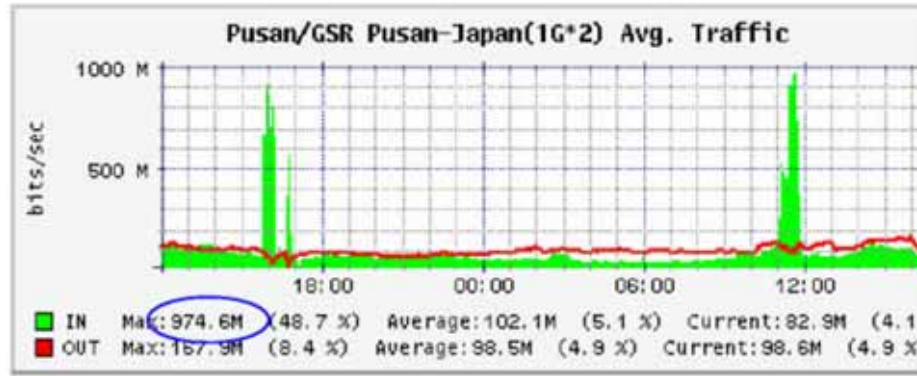
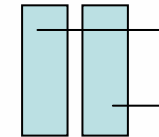




8, 9 Nov. 2005



13 Jan. 2006





Tele-Medical

清水 @ 九大

- Surgery
- Endoscopy
- Medical informatics
- Pathology
- Interventional radiology
- Nursing, Healthcare
- Bird flu, SARS
- Medical e-lecture
- Tele-consultation, etc.



The First Live Endoscopic Surgery

O

Surgical movie

Aug 1, 2003



- Lap. distal gastrectomy
- Security software used



Kyushu Univ.,
Japan



NCC,
Korea

AARNET



2006.9.14

- Canberra
- Adelaide
- Fukuoka

First to
Canberra

慶尚大学訪問・セミナー



2006.9.15

- Fukuoka
- Jinju

慶尚大学へ
初めて接続

韓国早期胃癌研究会



2006.9.22



- Fukuoka
- Seoul

First to SNU
main hospital

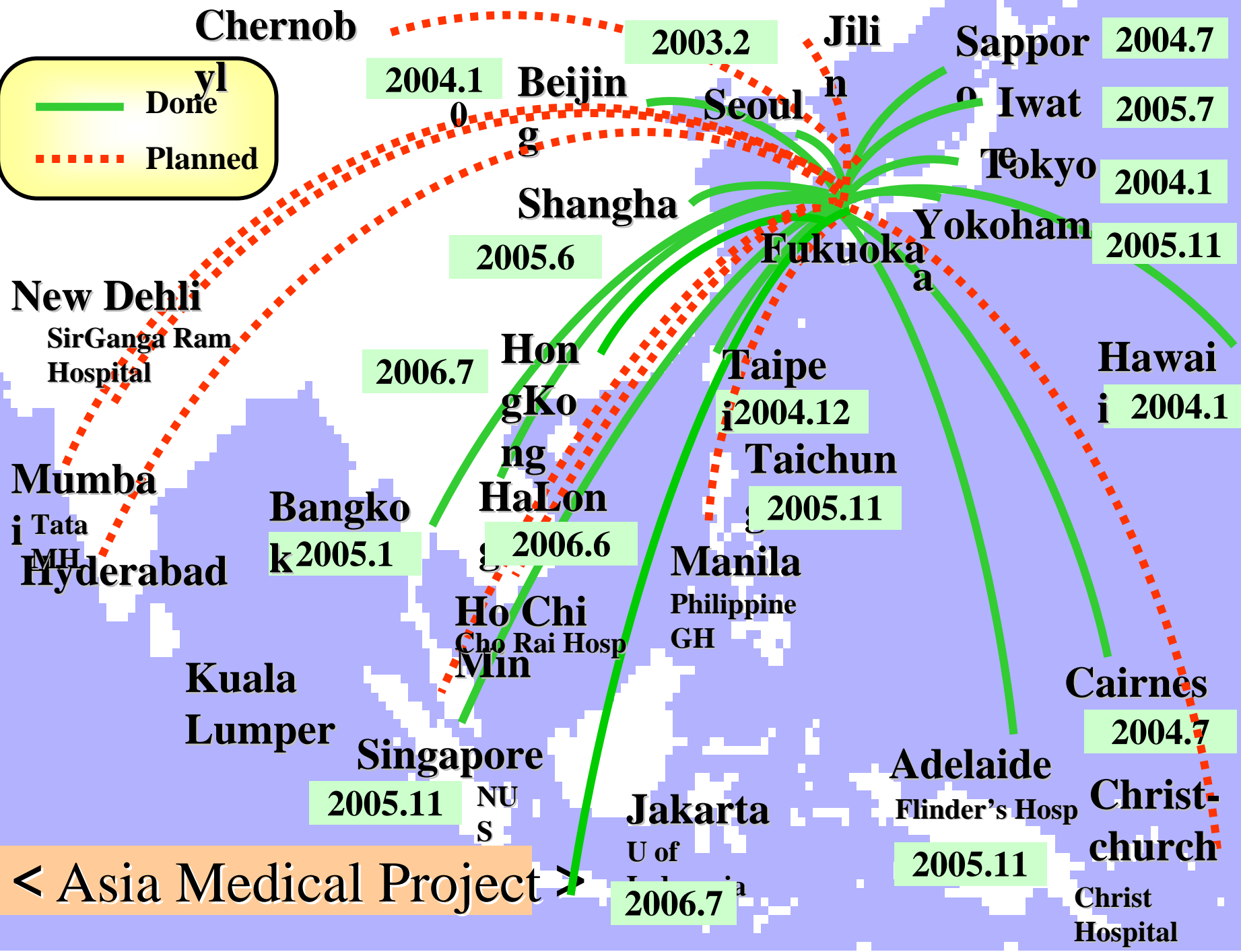
第1回日タイ拠点セミナー



2006.10.5

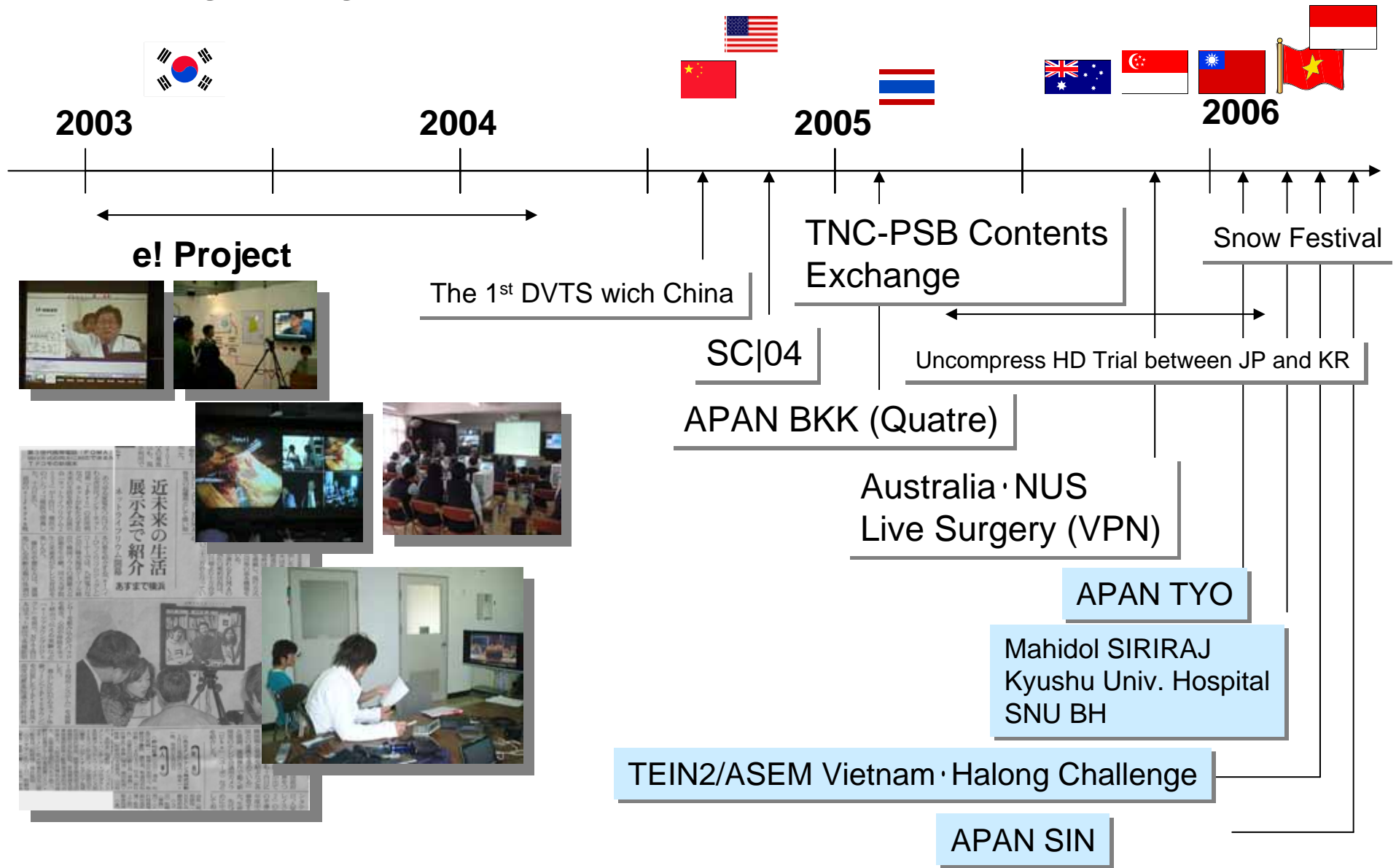


- Fukuoka
- Bangkok



< Asia Medical Project >

High Right of our International Case Studies



Live demonstration @ APAN-Tokyo

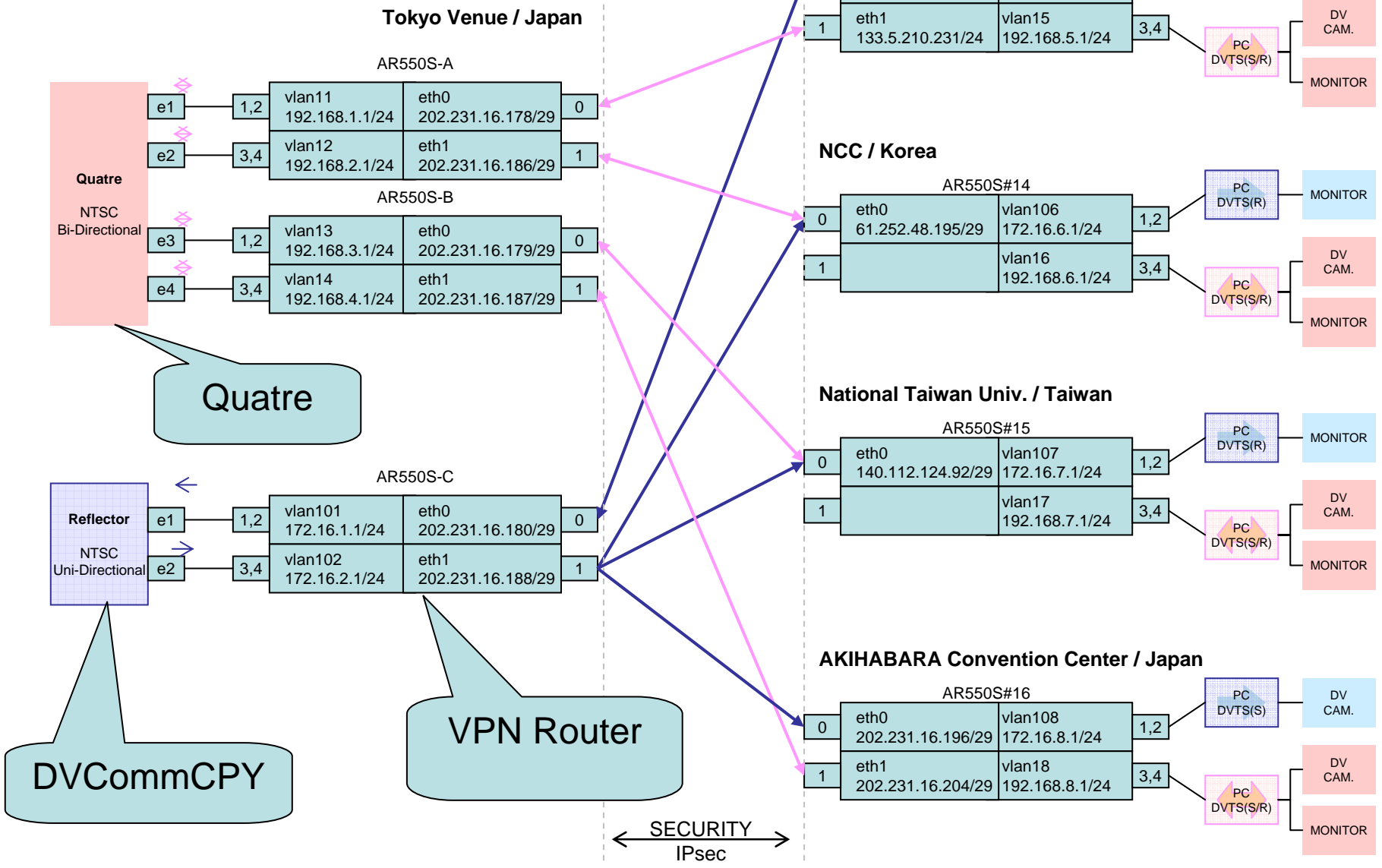
2006.1.25

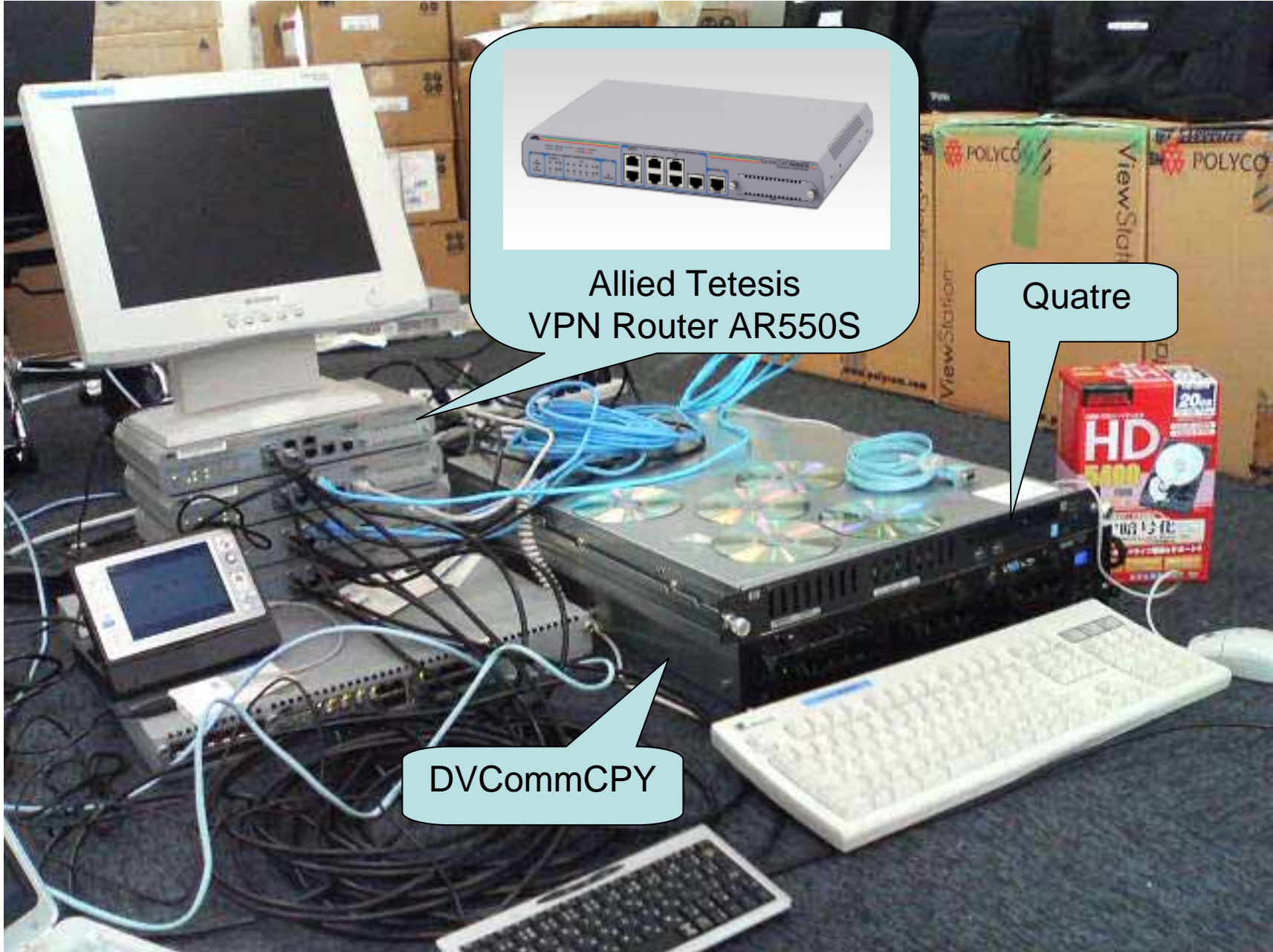


- Kyushu
- Tokyo
- Seoul
- Taipei

APAN Tokyo (25-Jan-2006)

Last up date 23-Jan-2006 20:45f





Allied Tesis
VPN Router AR550S

Quatre

DVCommCPY

**[4] International
Congress at
Bangkok**

**Teleconference
on endocrine
surgery**



SNU Bundang Hospital

Seoul

Fukuoka



Kyushu Univ Hospital

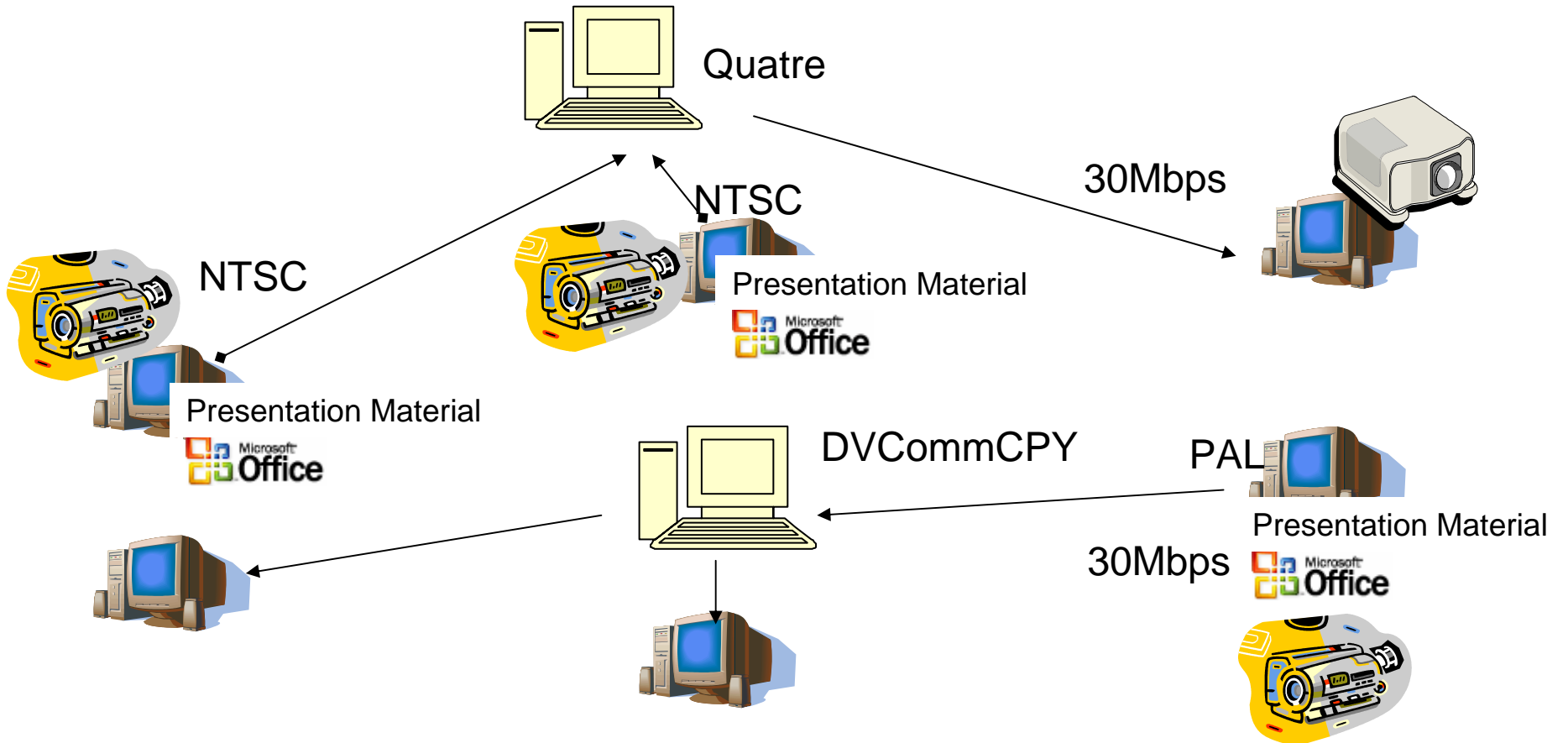
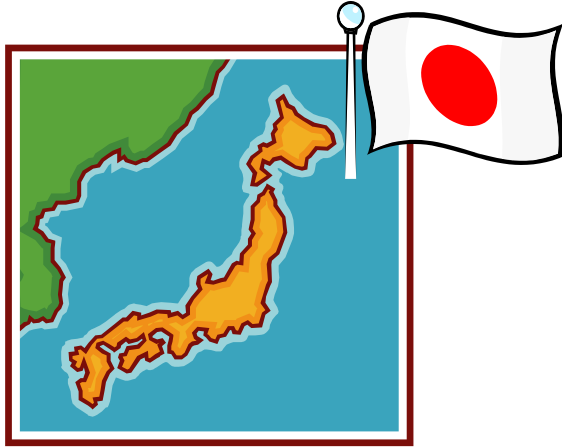
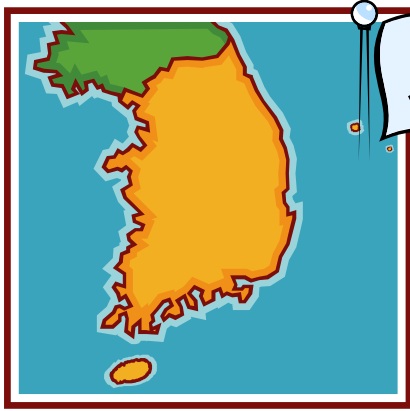
3734km



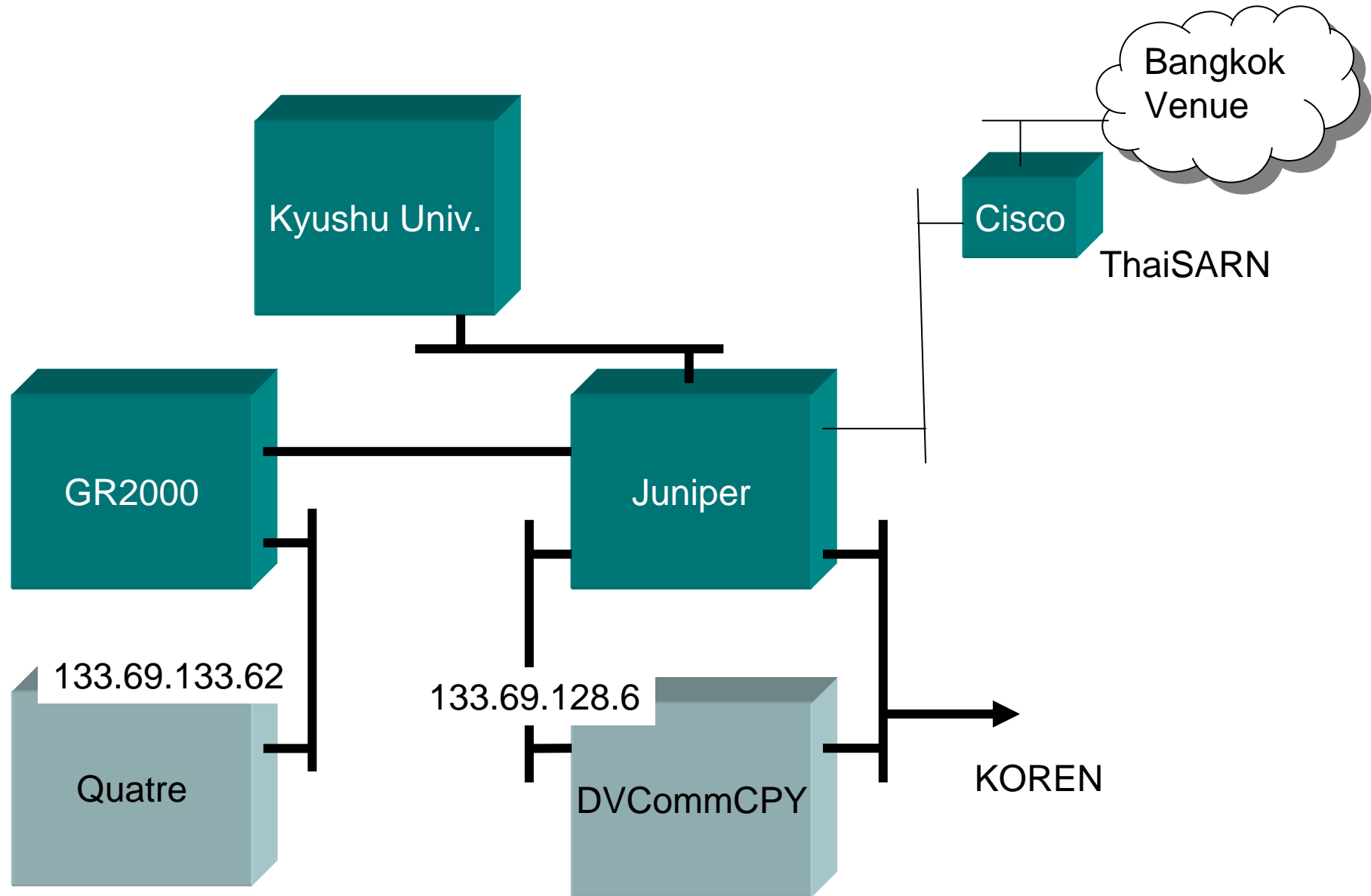
Queen Sirikit National Convention Center

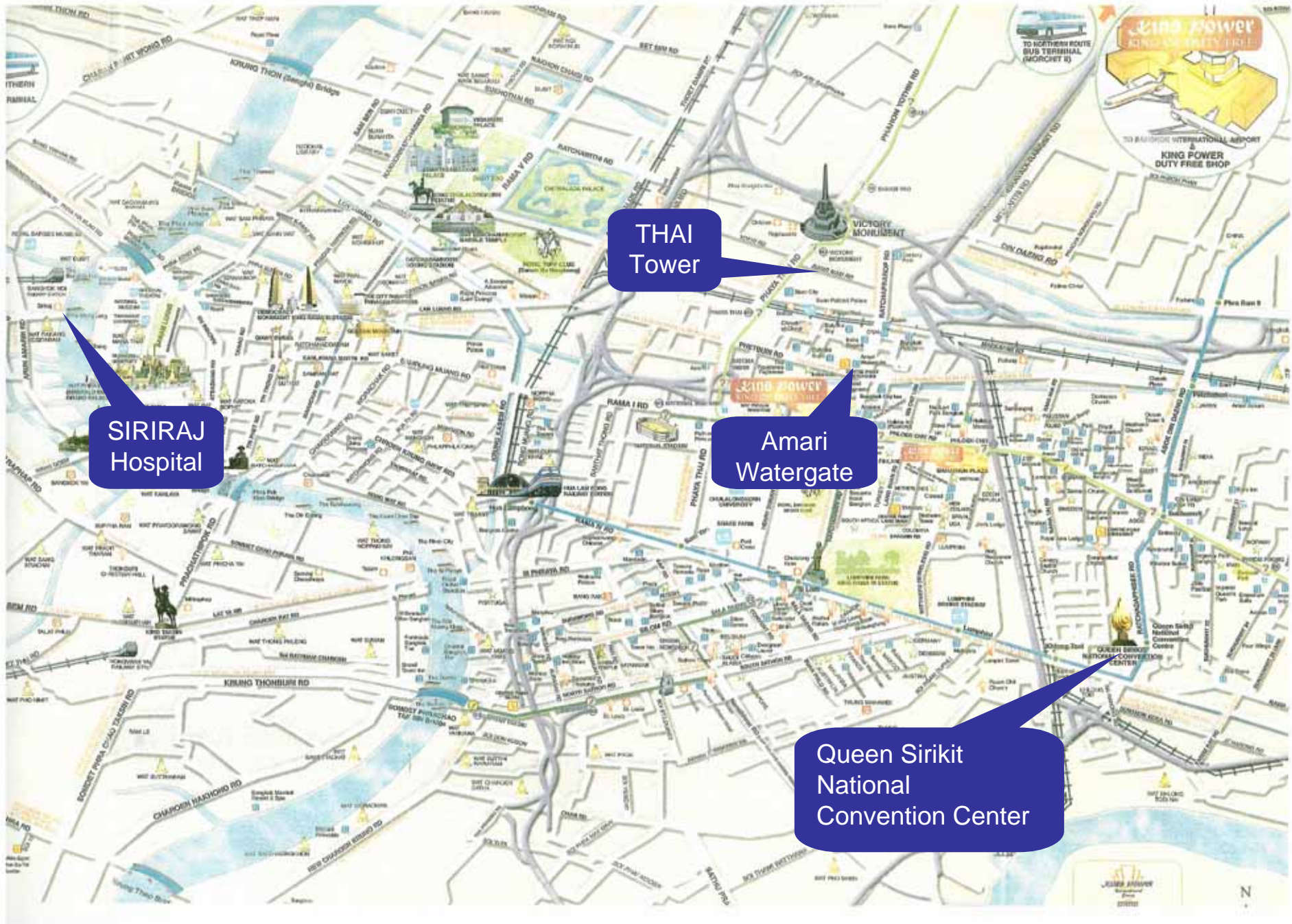
Bangkok

2006.4.19



Configuration of Network/Servers





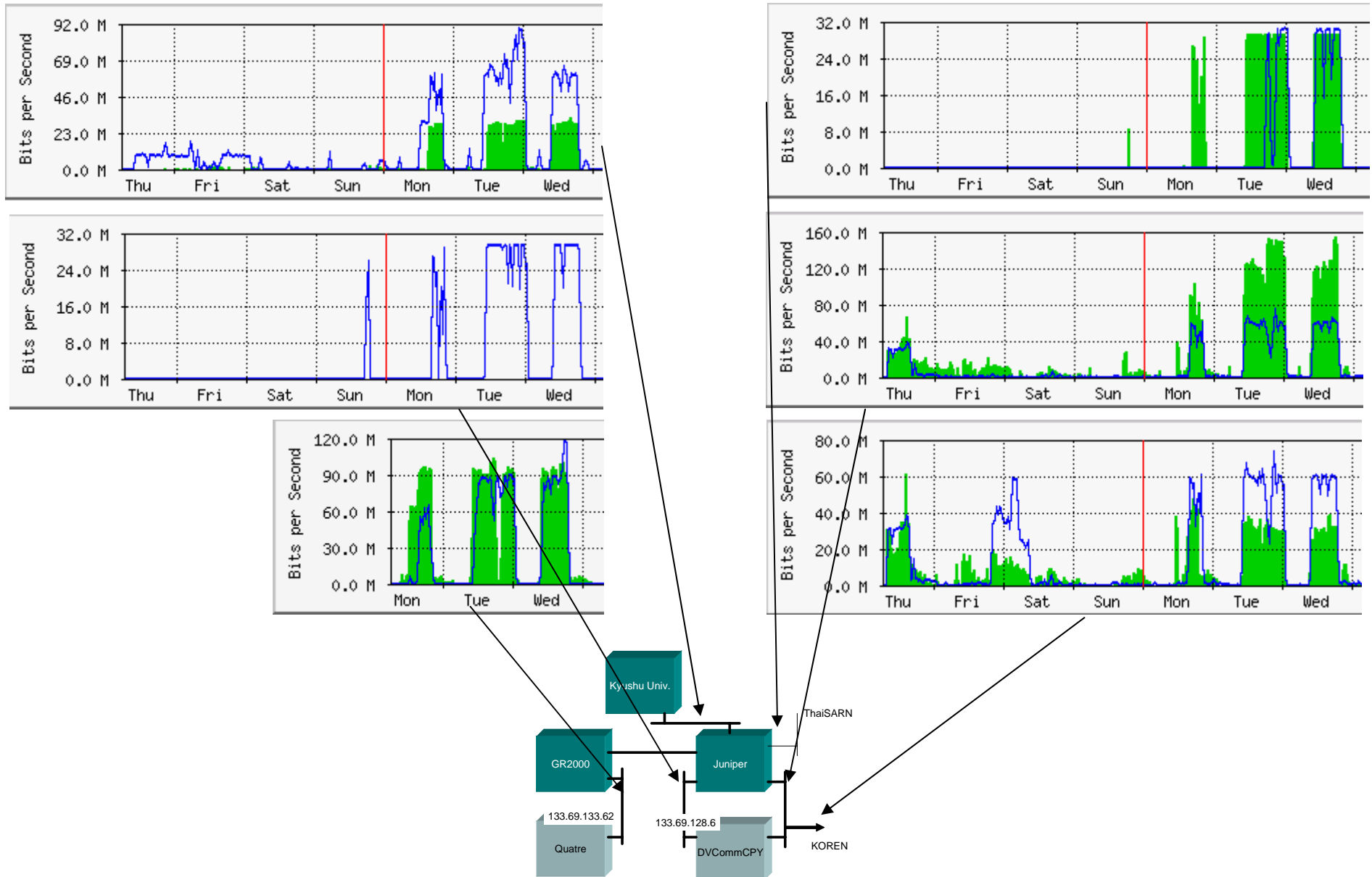
SIRIRAJ Hospital

THAI Tower

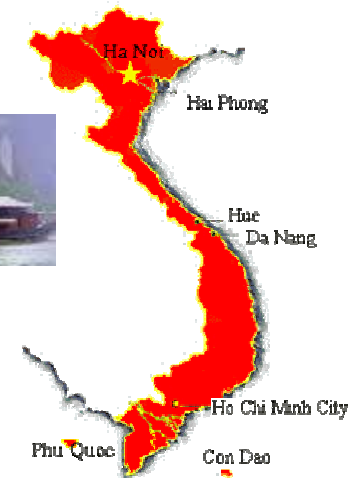
Amari Watgate

Queen Sirikit National Convention Center

Network Traffic of Routers/Servers



Halong, Vietnam Demonstration @ ASEM/TEIN2, 8th July, 2006

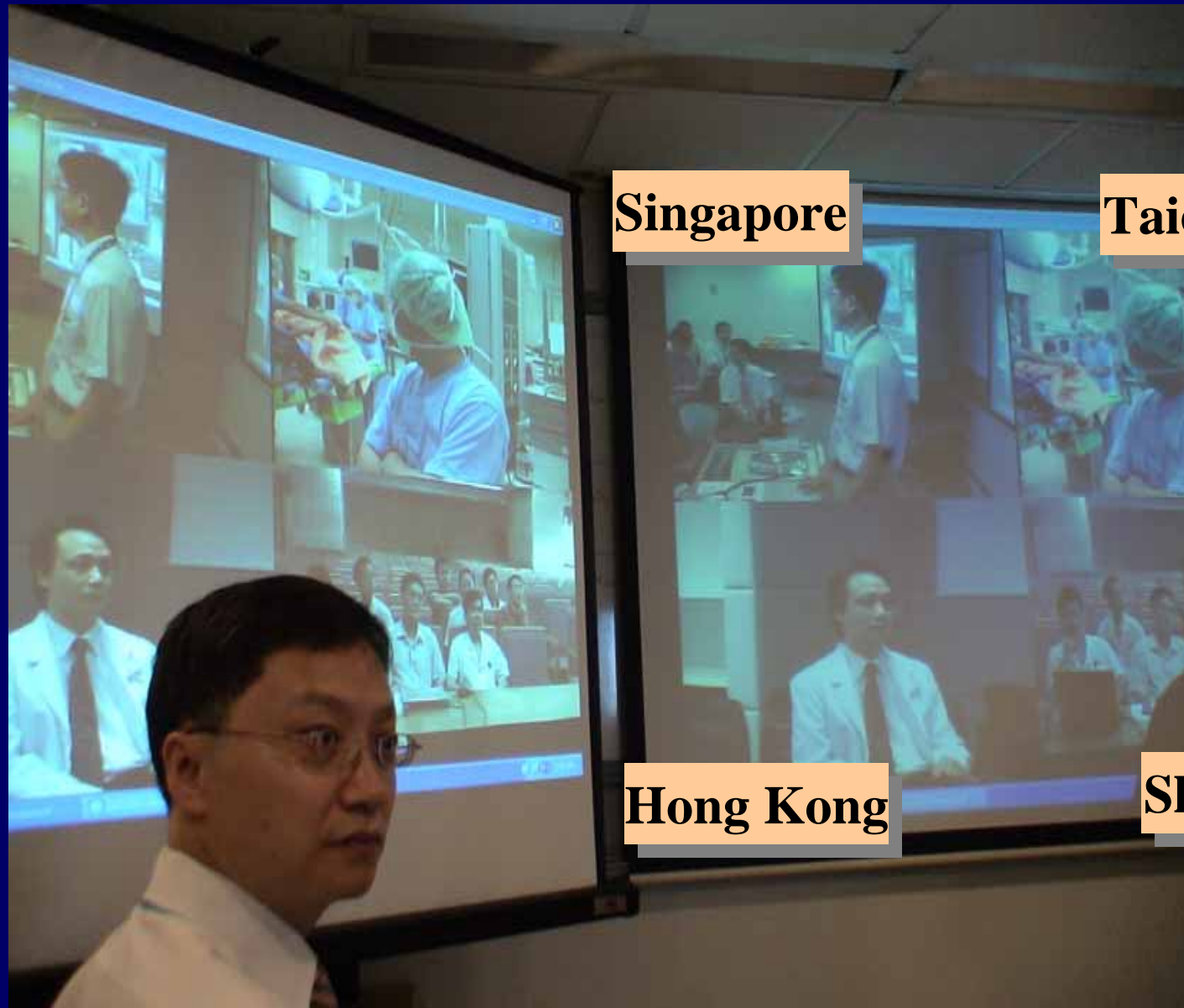


Halong, Vietnam Demonstration @ ASEM/TEIN2, 8th July, 2006



First connection to HK @ Live surgery

2006.7.20

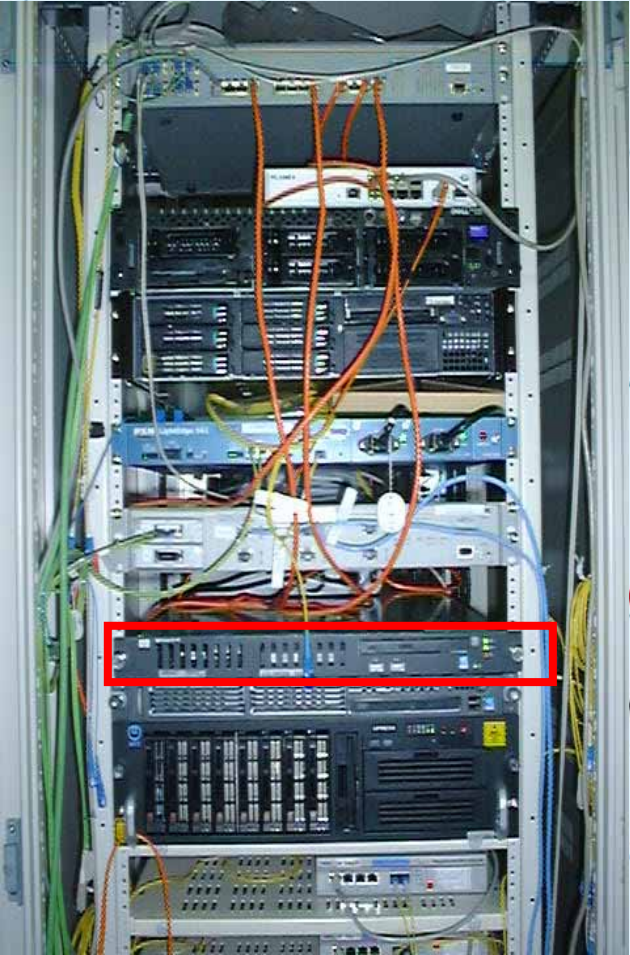
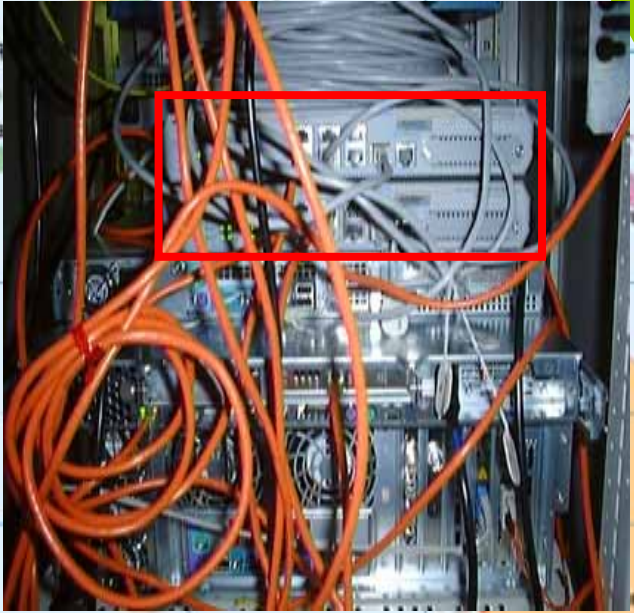


Singapore

Taichung

Hong Kong

Shanghai



APAN-Singapore

Kyushu Univ.

2006.7.20

Bangkok

Singapore

Japan

Singapore

Bandung

First high-speed connection to Indonesia

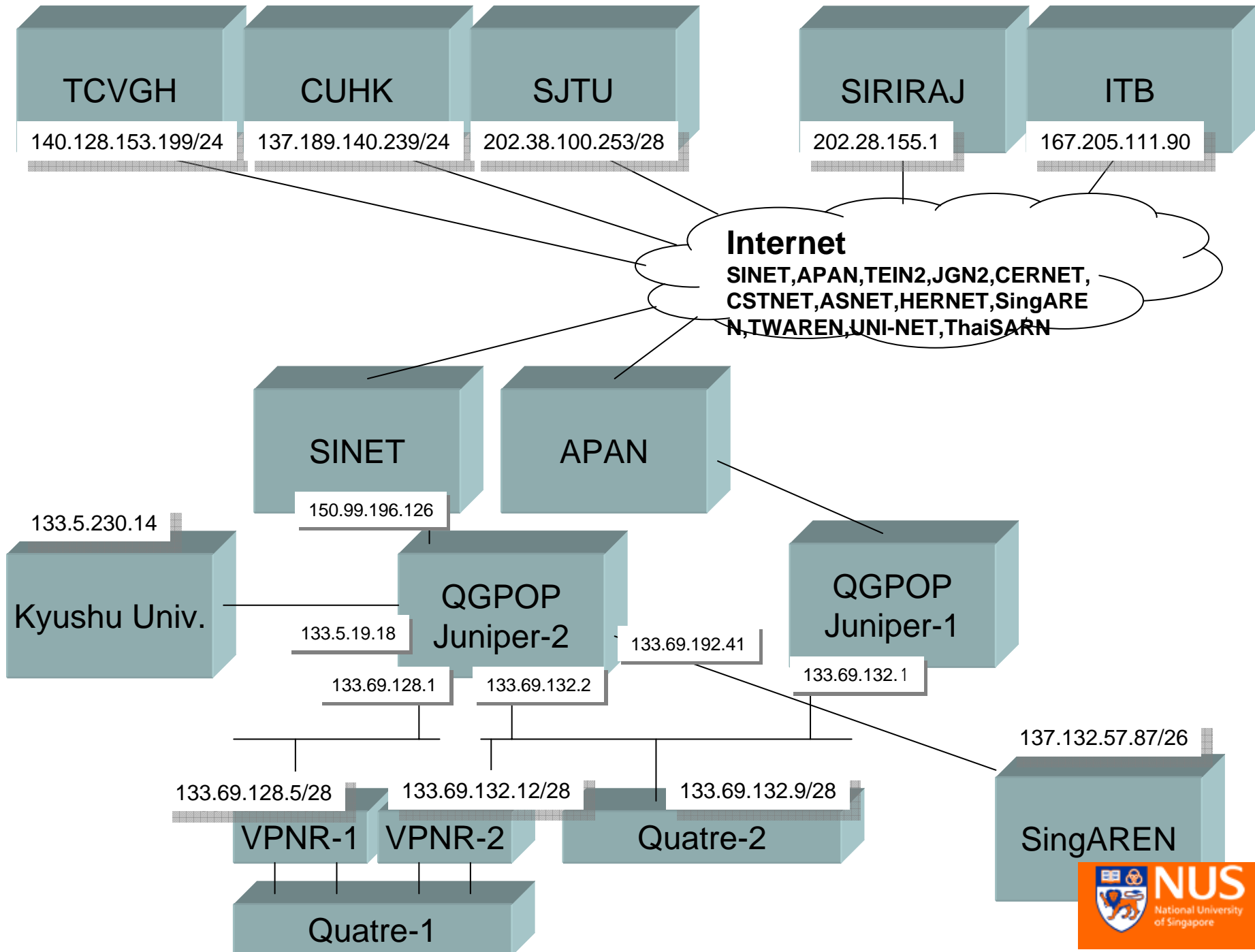


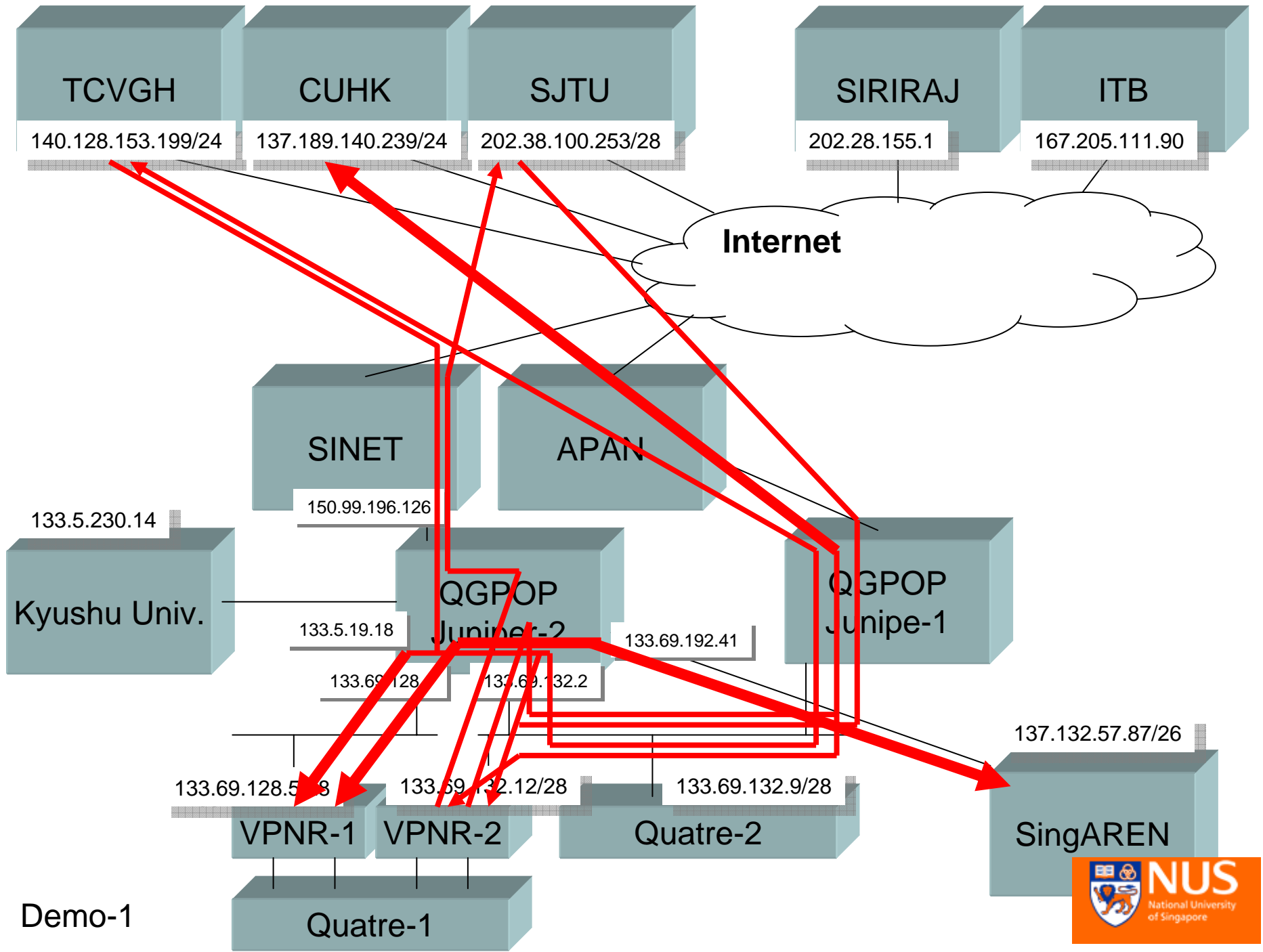
Thailand



Indonesia

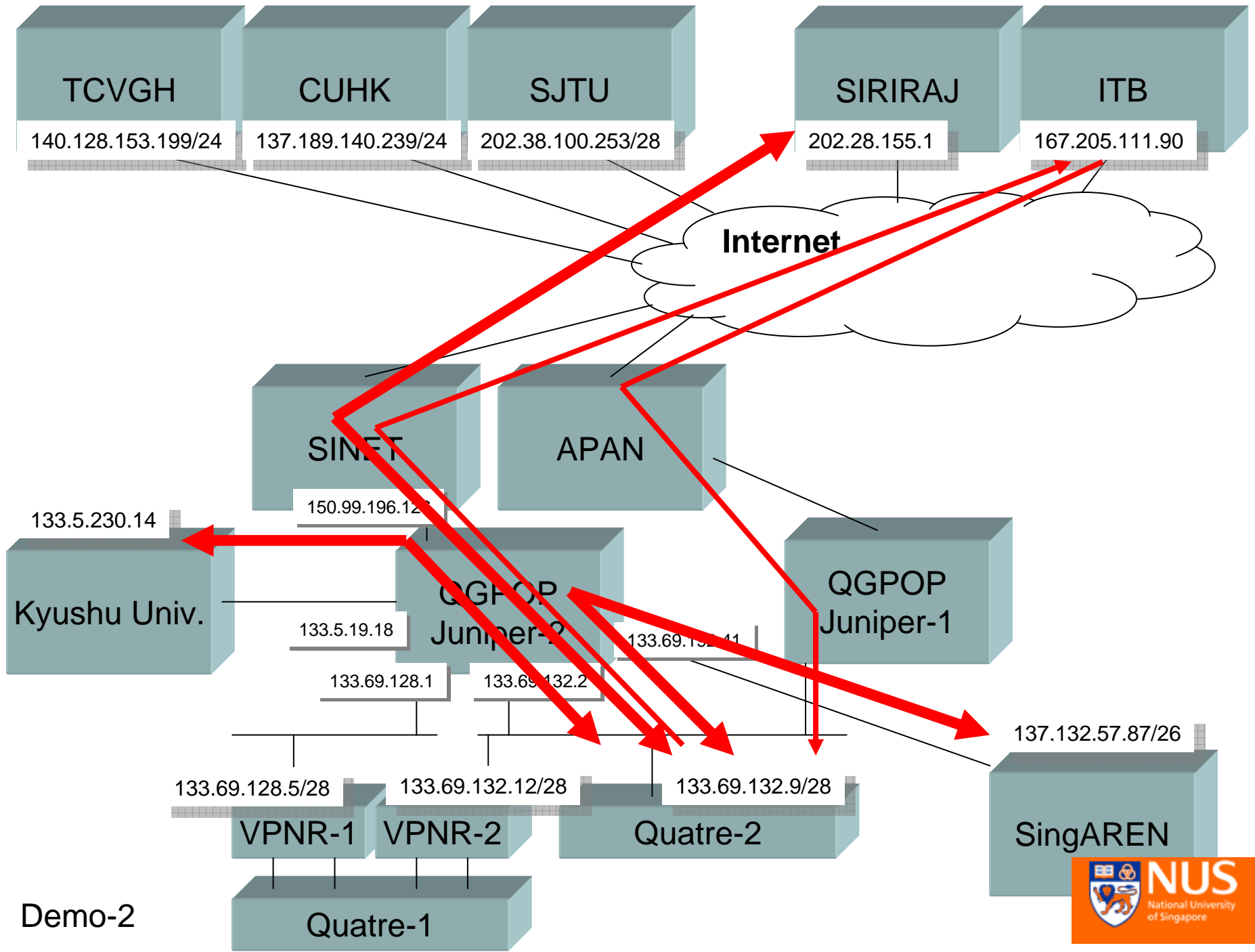
NEW ZEALAND





Demo-1

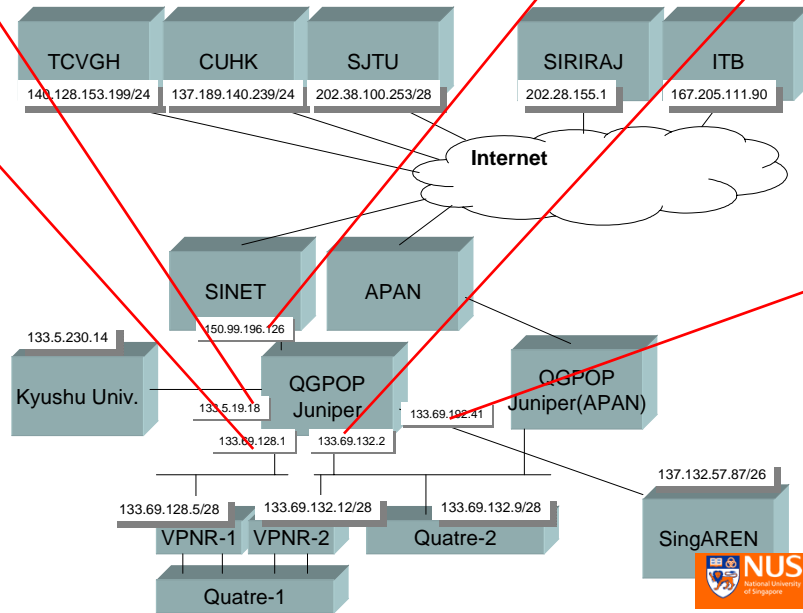
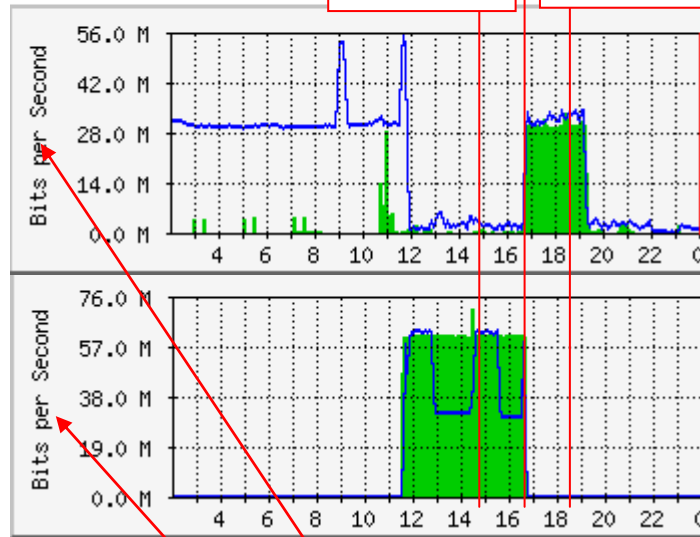




Ip: 133.5.19.18 (hakozi-juniper.ec.kyushu-u)

The statistics were last updated **Friday, 21 July 2006** at which time 'hakozi-juniper' had been up for 121 da

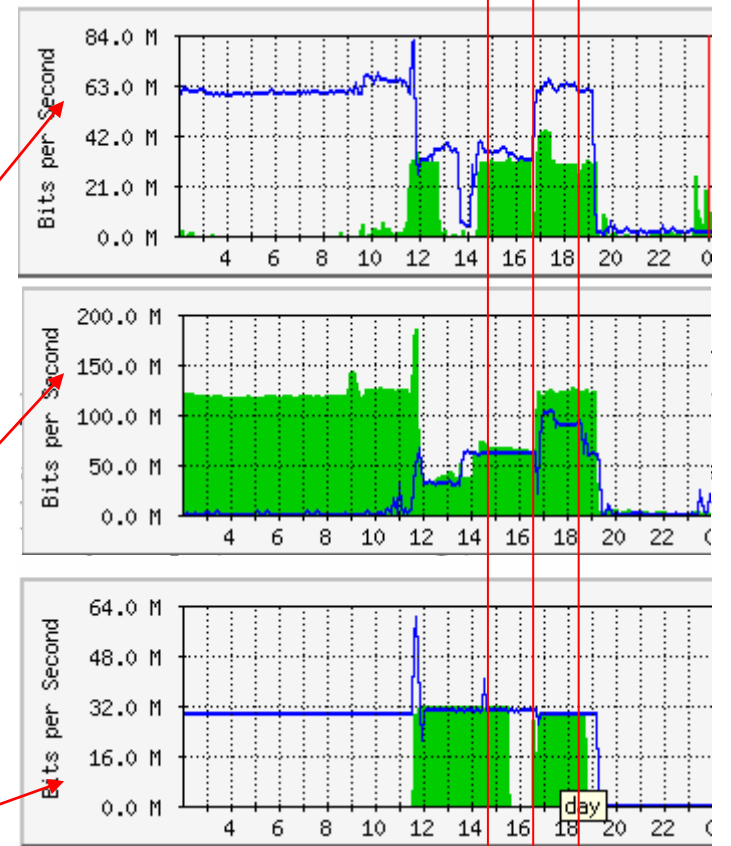
'Daily' Graph (5 Minute **demo1** **demo2**)



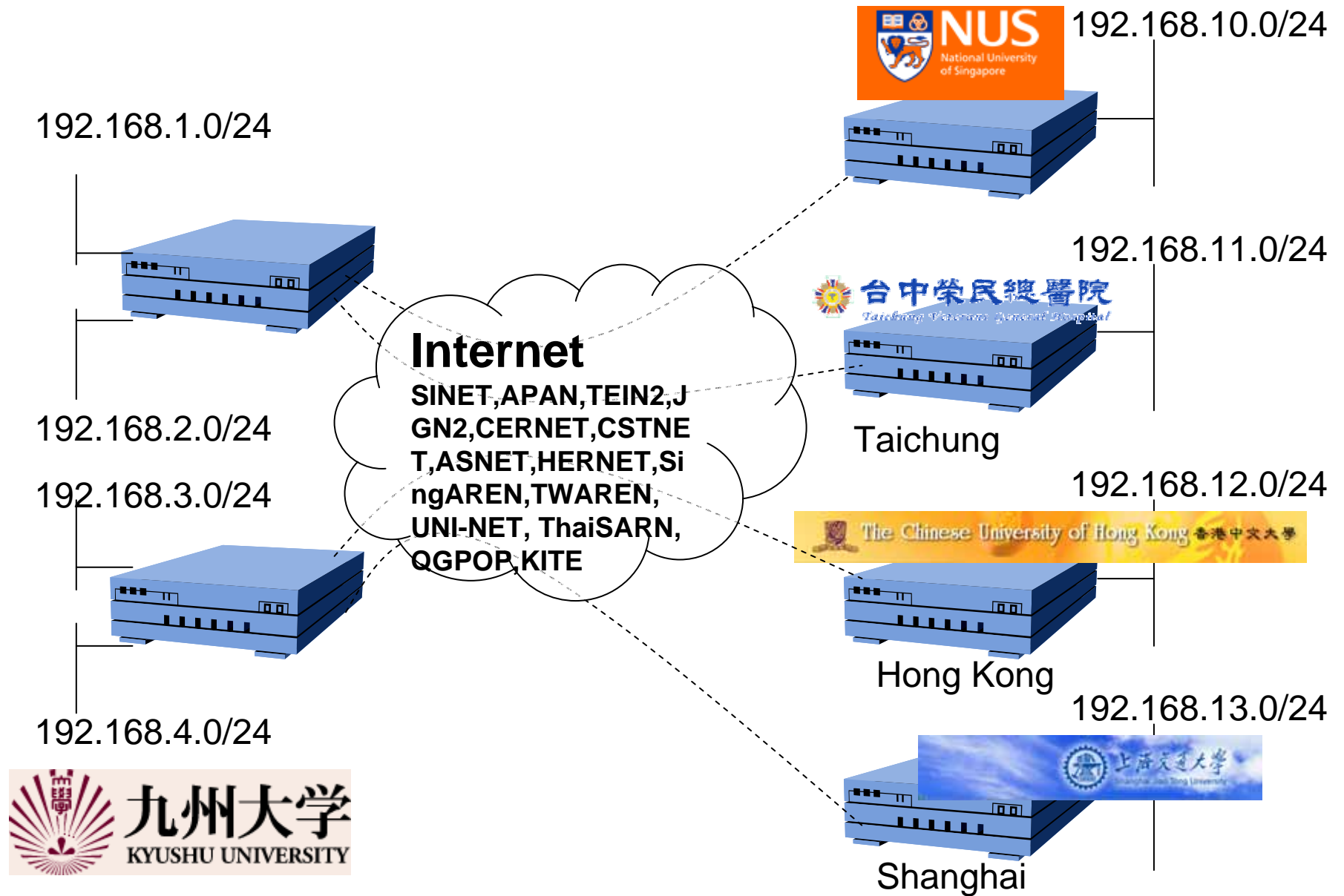
Ip: 150.99.196.126 (genkai.gw.sinet.ad.jp)

The statistics were last updated **Friday, 21 July 2006** at which time 'hakozi-juniper' had been up for 121 da

'Daily' Graph (5 Minute **demo1** **demo2**)

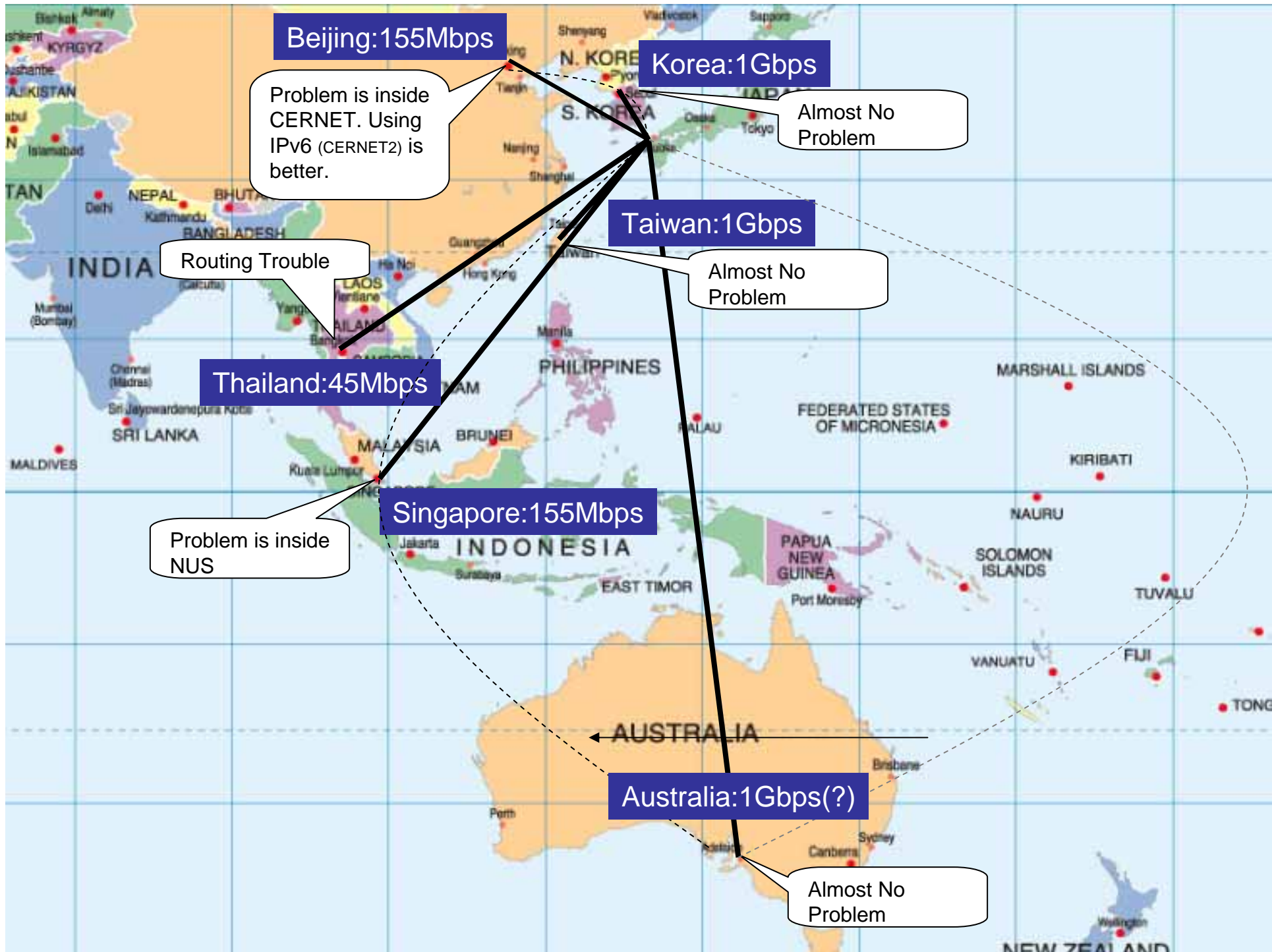


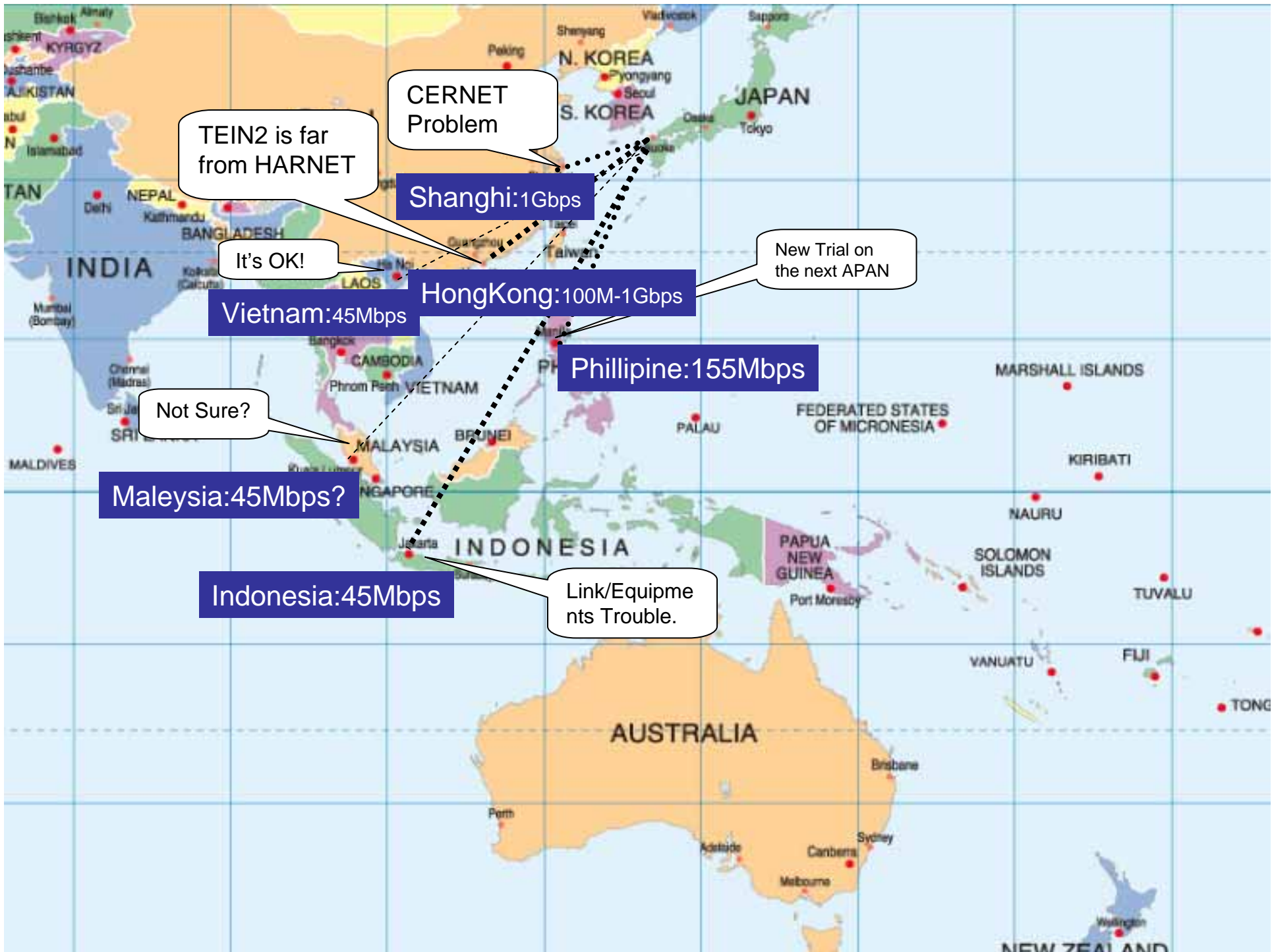
Demo-1



Activity Policy as Research

- **Use Internet** (never use intra-net)
 - Focus on Practical use (not just an event)
 - Keep Human (Local Engineers) Relationships
 - **Actual BGP Operation** (Development and Operation of the NGI)
 - How to find the best AS PATH
 - Trouble Shooting using Routing Information (AS PATH) and Flow data
 - We must secure at least 30Mbps for the future oriented applications
 - **Security/Privacy**
 - IP-SEC







Conclusion

- Teamwork is important
 - Core : QGPOP
 - International R&E Network
 - SINET, APAN, TEIN2, JGN2, CERNET, CSTNET, AS NET, HERNET, SingAREN, TWAREN, UNI-NET, ThaiSARN,
 - Company Supporters
 - KEPCO, NTT Communications
 - Allied Telesyn
 - SONY