Slide 1

Status of the Research & Education network in Vietnam: VinaREN

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TEIN2   VinaREN
www.vinaren.vn

Slide 2
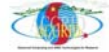
Contents

- About the TEIN Initiative by ASEM3
- Outline about the TEIN2 of ASEM5
- Sustainable Development: TEIN3 by ASEM6
- Some NRENs in Asia
- Vietnam communities' Participation: TEIN2-VN
- Vietnam Research & Education Network: VinaREN
- Vietnam's Activities (WGs): R&D, Applications in e-Learning, e-Health, e-Medicine, Grid, Bio-*
- Conclusions

ASEM   ASEM5   ASEM 6   APEC

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Slide 3

About the TEIN Initiative

- TEIN: Trans-Eurasia Information Network
- Proposed by the 3rd ASEM Summit in Oct. 2000
- Dec. 2001: Euro-Asia Interconnectivity by RENATER ("Le Réseau National de Télécommunications pour la Technologie, l'Enseignement et la Recherche", http://www.rcnater.fr), sponsored by France, and KISDI (Korea Information Strategy Development Institute, http://www.kisdi.re.kr), Korea, initially 2Mbps, then 34Mbps
- Nov. 2003: EC offered a support of 10M Euro for the TEIN2 as next step of the TEIN
- Jan. 2004: Meeting by ASEM Representatives for TEIN2 (Governmental Officers, Experts, Researchers, NRENs)
- May 2004: The 1st Meeting of Technical Committee of TEIN2

ASEM   Tein

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Slide 4

TEIN and TEIN2: Where and What?

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Slide 5
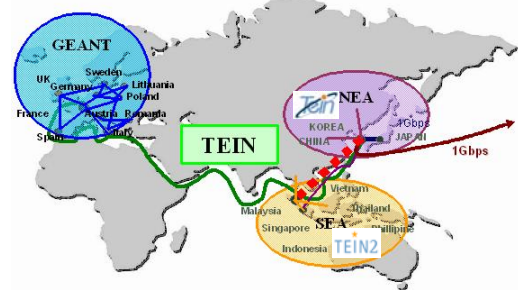
Outline about the TEIN2

- Positive Conditions:
  - Successes of the TEIN between France and Korea (Pre-TEIN2)
  - EC support the Developing Countries in ASEM
  - Based on the TEIN Initiative between Asia and Europe

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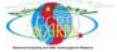**Slide 6**

Outline about the TEIN2

- Goals:
  - Improve the Asian-Euro backbone
  - Provide the Asian-Euro backbone
  - Establish the equal conditions in accessing the resources of National Research Educational Networks (NRENs)
  - Create a S&T collaboration on the ICT base
  - Reduce a digital divide among ASEM countries

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Outline about the TEIN2

- Some main members
  - DANTE is main body and manager of this project
    - DANTE www.dante.net of European NRENs (National Research and Education Networks): Delivery of Advanced Network Technology to Europe
    - Under a Contract of 12.5 M Euro (EC support 9.75 M Euro)
  - 6 Beneficiaries: China, Indonesia, Malaysia, Philippine, Thailand, and Vietnam (should pay of 20% of the cost)
  - Others (by their full costs): Japan, Korea, Singapore, Australia, Brunei, Taiwan, …
  - France, UK, Holland, Sweden, France, Germany, … from EU
  - Observer and Supporter: US

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Plan of the TEIN2

- 2 phases
  - F/S Phase (phase 1)
  - Implementation Phase (phase 2)
    - Phase 2A: Preparation, Implementation
    - Phase 2B: Operations

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Plan of the TEIN2

- Phase 1: F/S
  - Time: About 6 months
  - Tasks:
    - Surveys
    - Defining and Contacting the Participants
    - Experiences Sharing
    - Establishing partners collaborations
    - Collecting "Letters of Commitment"
    - Establishing a Policy Committee of TEIN
    - 1st TEIN2 Meeting at Kuala Lumpur, May 2004
  - Starting Phase 2, if Phase 1 is accepted by EC

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Plan of TEIN2

- Phase 2A: Preparation and Implementation
  - Equipment Procurement:
    - **The rules of EU**
    - **No fixed solutions**
  - Discussions with Providers
  - Financial Supports from non-beneficiaries Countries (Japan, Korea, Singapore, Brunei, Australia, …)
  - Design
  - Implementation:
    - **Equipment Installation and Testing**
    - **Connectivity Establishment**
    - **Skill Training for Network Operations Centre (NOC)**

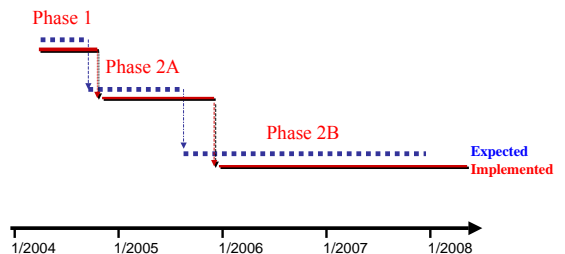TEIN2 tein2-vn@mail.hut.edu.vn REN 10

Plan for TEIN2

- Phase 2B: Operations
  - Operation Management
  - Study on Sustainable Development Plan
  - Technical Support
  - Applications
    - Academic resources from TEIN2 countries' Institutions (more than 3500 institution resources) for e-Learning and R&D Databases
    - E-Learning and OCW among the members' Institutions
    - Distance Learning, Conferencing by Video-Conferencing
    - Telemedicine
    - E-Culture, e-Health, e-Business, e-Library, e-Government, e-*
    - SGI: Grid Computing, HPC, Bio-Informatics, …
  - Collaborations with other Network Organizations (APAN, AI3, NRENs, Internet2 of US, …)

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Expected and Implemented Schedules of TEIN2

Phase 1
Phase 2A
Phase 2B
Expected
Implemented

1/2004 1/2005 1/2006 1/2007 1/2008

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Managing Body of TEIN2: DANTE

- DANTE www.dante.net is one of the European NRENs (National Research and Education Networks)
- DANTE has implemented a number of internet projects in Europe and Areas:
  - SEEREN (South Eastern European Research & Education Networking)
  - EUMEDCONNECT (Euro-MEDiterranean Information Society)
  - ALICE (America Latina Interconectada Con Europa)
  - Operating the GÉANT (NREN of 26 National R&E Networks from Europe)
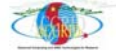
TEIN2 Participation of Vietnam's R&E Communities

- Basic Conditions
  - As a TEIN2 Expected Beneficiary
  - VAST, HUT, VNU… are Key Institutions in S&T for TEIN2 Activities
  - Good Relations with other Organizations in the Region
    - **AI3, Japan, and ASEAN**
    - **APAN of Asia-Pacific Areas**
- Technical Abilities
  - MOST: Managing Ministry in S&T, R&D
  - VAST, HUT, VNU … are Leading Institutions in Vietnam
  - VAST, HUT, VNU … are with Good Staff and Int'l Relations
  - Many Institutions in VN are Interested in this TEIN2-VN: Hanoi, HCMC, VNU, MOET, HCMC-UT, Danang UT, CanTho U.. and Others

Vietnam's Benefits from TEIN2

- Asia-Europe Connectivity of 45 – 155Mbps by TEIN2 (at beginning, but implemented: 3 x 622Mbps + more)
- Up to 80% of the funding by EC till Dec. 2007. In addition, there will be a sustainable development among ASEM Countries
- Good chances for Collaboration among the TEIN2 members:
  - NRENs in Europe, Asia and other Areas
  - Improvement of ICT Infrastructure and R&D and Education
  - ICT-based R&E Projects in any Fields

Some Good Case Studies by TEIN

- Chungnam Univ., Korea: Project "Water quality models" with Medicine Univ. and Institutions in Denmark
- Univ. of Bio-Medicine Technology, Enje Univ., Korea: Project on Teledermatology with Europe and China
- Kunkook Univ., Korea: Project for Mobile IPv6 with NRENs in France and Belgium
- Soongsil Univ., Korea: Project of AGEDIS (**A**utomated **G**eneration and **E**xecution of Test Suites for **DI**stributed Component-based **S**oftware) with Germany

Some NRENs in Asia

- China: CERNET & CERNET2
- Japan: SINET
- Korea: KOREN & KRENONET
- Singapore: SingAREN
- Thailand: ThaiSARN
- Malaysia: MyREN
- Etc.

APAN: Asia-Pacific Advanced Network

- Established in 1997 by Japan, USA's Initiative
- Goals:
  - To coordinate and promote network technology developments and advances in network-based applications and services;
  - To coordinate the development of an advanced networking environment for research and education communities in the Asia-Pacific region; and
  - To encourage and promote global cooperation to help achieve the above.
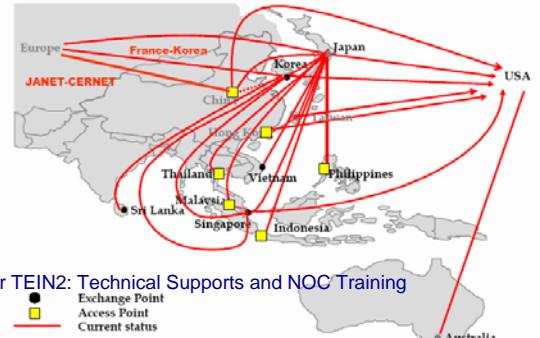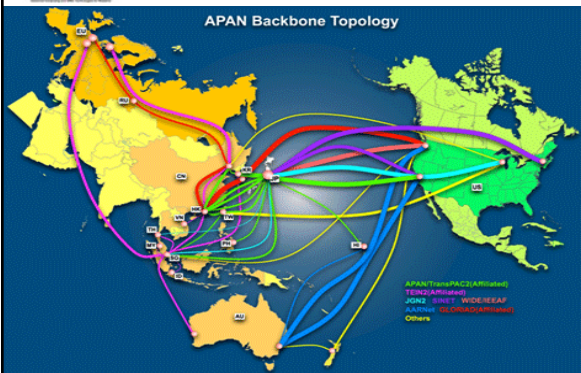
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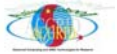
APAN's Activities

- Holding meetings, workshops and conferences;
- Exchanging technical information among its community and beyond;
- Arranging and organizing education and training workshops; and
- Promoting and encouraging regional connectivity

Slide 20

APAN: Asia-Pacific Advanced Network

For TEIN2: Technical Supports and NOC Training

- ● Exchange Point
- ▢ Access Point
- ── Current status

Slide (middle left)

APAN Backbone Topology

Slide (middle right)


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APAN and TEIN2's WGs

- **Education and Trainings (for NOCs)**
- **Network Technology**
  - Network Research
  - IPv6
  - Network Security
  - Network Engineering
- **Application Technology**
  - Grid computing
  - Disaster Management
  - Medical applications
- **Natural Resources**
  - Earth Monitoring
  - AG/Field Server/Sensor
- **e-* and Collaboration**
  - Routing coordination
  - Lambda BOF
  - Global Collaboration
  - e-Science
  - e-Culture
- **Others**
  - Digital Archives
  - Middleware

Slide 24

TEIN2-VN/VinaREN Symposiums

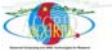- The 1st National Symposium on TEIN2-VN and VinaREN in Dec. 3, 2005
- 70 participants from 40 Institutions/Centers in Vietnam
- All participants Asked to Implement and Develop TEIN2-VN/VinaREN Project
- Main Issues:
  - Management?
  - Contents?
  - Costs?
- MOST Agreed to Implement the TEIN2-VN/VinaREN
- The 2nd VinaREN Symposium on July 17 (HN) and July 21 (HCMC), 2007
- The 3rd VinaREN Symposium: Dec. 2007

TEIN2 Topology

TEIN2 Topology: Step1

Step 2

Step 3

TEIN2 Topology as of June 2006
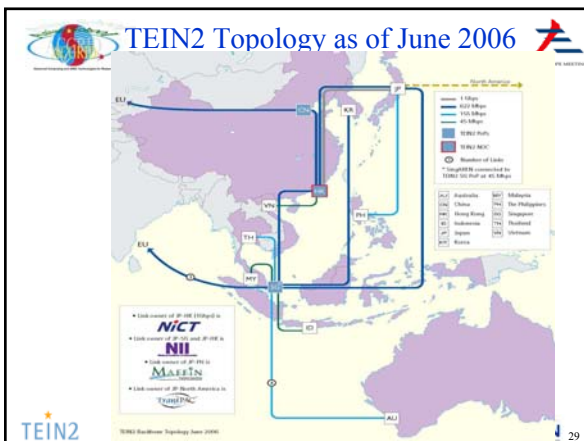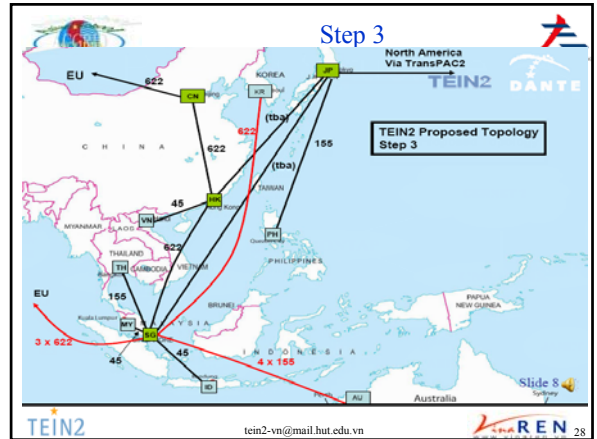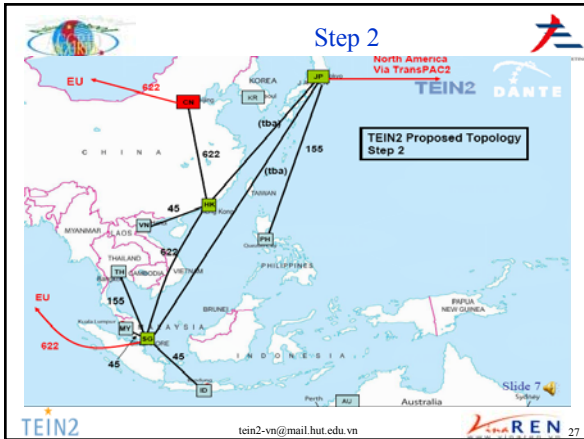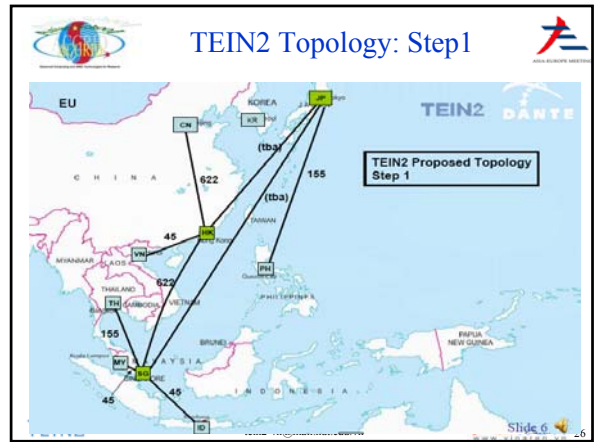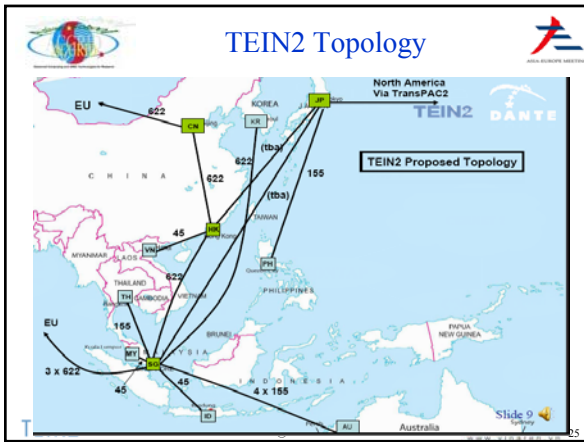
Vietnam's Activities in TEIN2

– MOET, MOST actively did necessary procedures with DANTE
– Attended 11 meetings of TEIN2 during 2004-2006
– Actively made positive suggestions in designing and implementing the TEIN2
– Most important meeting for Vietnam: the 10th meeting in Halong, Vietnam on June 6-8, 2006
  • Launching the TEIN2 connectivity to Vietnam, as TEIN2-VN
  • Launching an NREN of Vietnam: VinaREN connected to TEIN2 (TEIN2-VN/VinaREN)
  • Showing the TEIN2 demonstration to ASEM SOM meeting for ASEM6 summit meeting in Helsinki (Sep, 2006)
– Last meeting: 11th meeting in HK for TEIN3 as TEIN2's sustainable development with commitment of ASEM countries.

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TEIN2-Meeting11

- Oct. 29 - Nov. 2, 2006, HongKong
- Participants: 38 people
- Contents:
  - TEIN2 NOC updates (HK)
  - NRENs NOC updates
  - Technical Issues
    - TEIN2 measurement and trouble ticket procedure
    - TEIN2 Routing discussion
    - TEIN2 IPv6 and multicast solution discussion
    - TEIN2 high performance application support discussion
    - Possible demo for ASEM ICT Ministers meeting in Hanoi (Dec. 1, 2006)
  - ThaiSARN connected to TEIN2 on June 20, 2006 at 155 Mbps
  - Laos was Accepted as a Beneficiary Country
  - TEIN3 proposal (Since Apr. 2008 – Dec. 2011)
  - TEIN3 Commitment from each Country

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Implementation Plans of TEIN2-VN

- In some phases
  - Phase 1A: Int'l Connectivity to NOC-VN at HUT: 45Mb then 155Mb
  - Phase 1B: Domestic Connectivity from NOC-VN at HUT to VAST, MOET, MOST, VNU, etc. in Hanoi (6/2006)
  - Establish the Vietnam Research and Education Network (VinaREN). The name was proposed by MOST Minister Hoang Van Phong on Aug. 3, 2005.
  - Phase 2A: NOCs in HCMC, Danang, Hue, and CanTho (NOC-HCM, NOC-DN, NOC-Hue, NOC-CT) (03/2007)
  - Phase 2B: Extensions to other Institutions 15 + 10 + 5 Points (6/2007)
  - Phase 3A: Extension to 50 Institutions. Expansion of the Connectivity if allowed by TEIN2 (12/2007)
  - Phase 3B: Sustainable Development, Expansion to others
- Detailed Plan for 2005-2007 with 3.7M USD
- MOST, HUT, IOIT, VNU, … actively prepared all conditions for TEIN2-VN/VinaREN

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TEIN2-VN/VinaREN Symposiums

- The 1st National Symposium on TEIN2-VN and VinaREN in Dec. 3, 2005
- 70 participants from 40 Institutions/Centers in Vietnam
- All participants Asked to Implement and Develop TEIN2-VN/VinaREN Project
- Main Issues:
  - Management?
  - Contents?
  - Costs?
- MOST Agreed to Implement the TEIN2-VN/VinaREN
- The 2nd VinaREN Symposium in HN and HCM, July 2007

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Phase 1A: Connectivity to NOC-VN at HUT

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Phase 1B: Hanoi Area

Phases 2A, 2B

TEIN2-VN/VinaREN Features

- Open Source Based Platform and Environment (OS, Network Tools, StarOffice, Open Office, e-learning platforms with OSS-LMS/LCSM/OCW, …)
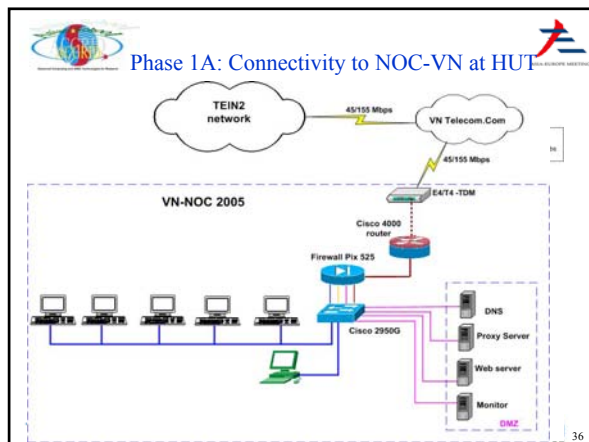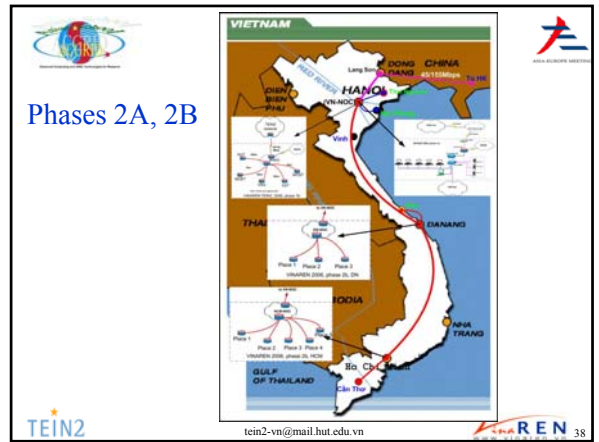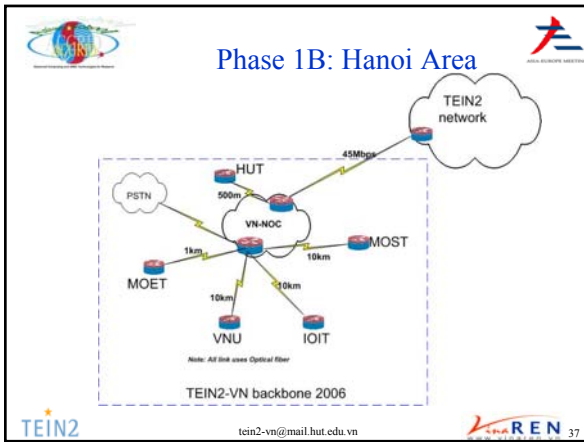- Operation and Maintenance by the Leading Institutions (IOIT, HUT, VNU, …)
- Experience Sharing with other NOCs, NRENs for the most advanced Solutions and Technology
- Focus on the Effectiveness and Efficiency of the Project
  - Connectivity from NOC-VN at HUT to most Important Institutions: VNU, MOET, MOST, VAST, NHP, Hanoi Medicine Univ., BachMai Hospital, and Other Research Institutes for H5N1, BirdFlu&SARS, Disasters Management, Environment Studies, Grid Computing, HPC,…
  - Video Conferencing for Intl R&E Activities: jp, fr, kr, cn, au, sg, id, th, ...
  - Cost Sharing Model for Sustainable Development of the VinaREN after TEIN2. TEIN3-VN by TEIN3 of ASEM

TEIN2-VN/VinaREN Applications: Video Conferencing

1. Halong meeting TEIN2 10th, June 2006
2. Vietnam-Thailand Science Technology celebration day
3. AI3 & SOI Asia e-Global workshop
4. SARS and Bird Flu Teleconference (HMU and Melbourne Royal Children Hospital)
5. HUT-KEIO Video Conferencing
6. Telemedicine using VC between National Hospital for Pediatrics (NHP) and Melbourne Royal Children hospital (RCH)
7. TEIN2 NRENs on 22nd Nov
8. Other VC and tele-activities

1. Halong meeting TEIN2 10th
(6th-8th June 2006)

- Overview: Halong meeting TEIN2 10th
- Purpose:
  - TEIN2 official launching with e-Culture demo, Telemedicine demo
  - TEIN2-VN/VINAREN launching
- Members:
  - TEIN2-VN: Halong meeting venue, NOC-VN, IOIT, NACESTI, NHP
  - NRENs: KoREN, MyREN
  - Oversea Institutions: Melbourne Royal hospital (Au), Kyushu University Hospital (JP)
- Solution: Point to multipoints
- Equipment:
  - Halong: Sony IP camera (PCS - G70, MCU):
  - Melbourne Royal hospital: Polycom IP camera (MCU)
- Bandwidth usage: 45Mbps
- Environment: TEIN2

Launching of TEIN2-VN/VinaREN

DEMO schedule
(8th June 2006)

- 16:15 - 16:45: Launching of TEIN2 network in Vietnam and VinaREN
- 16:50 - 17.15: Telemedicine Australia/Vietnam
- 17:20 - 17:45: Telemedicine (HDTV) from Japan (Kyushu University Hospital)
- 17:50 - 18:15: E-culture Show from Malaysia

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Demonstration for TEIN2 Ceremony

Kyushu U Hosp   Bangkok venue   2006.6.20

VIDEO CONFERENCING: Halong, AARNET, NOC-VN, HNP, …

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VC and DVTS at Halong Model and Configuration
(6th-8th June 2006)

TE

VC and DVTS at Halong meeting evaluation
(6th-8th June 2006)

1. Video Conferencing evaluation:
- **a. Advantage:**
  - Flexible, easy to use (just need IP), software is unnecessary
  - Point to multipoints
  - High availability (24/24)
  - Low bandwidth needed (2Mbps)
  - Quality: Acceptable for normal meeting, Teleconference
- **b. Disadvantage**
  - Video and Audio quality is not very good
- c. Trouble shooting
  - Difference IP camera vendors => have to discuss and adjust, synchronize Video/Audio coding standard (Ex. Polycome and Sony IP cameras)

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VC and DVTS at Halong meeting evaluation (2)
(6th-8th June 2006)

2. DVTS (Digital Video Transport System) evaluation:
- **a. Advantage:**
  - Flexible, easy to use, free software (just need Client IP)
  - Point to point (Client/Server)
  - High availability (24/24)
  - Quality: Smooth, very good for special applications (Telemedicine)
- **b. Disadvantage**
  - High bandwidth needed: 30Mbps/1flow
- c. Trouble shooting
  - Server side has to choose PAL/NTSC DVTS software for suitable PAL/NTSC Digital Video Camera

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2. Vietnam-Thailand Science Technology celebration day (NACESTI and ThaiSARN)
### (24th July 2006)

- Overview: Vietnam-Thailand Science Technology celebration day
- Purpose: discussion and cooperation proposal, sharing experience between NRENs
- Solution: Point to point
- Members: NACESTI (MOST) and ThaiSARN
- Equipment:
  - NACESTI (MOST): Sony IP camera (PCS-G50)
  - ThaiSARN: ...
- Bandwidth usage: 2Mbps
- Environment: TEIN2
- Video/Audio quality: acceptable, no interruption

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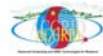
3. AI3 & SOI Asia e-Global workshop
(October 9th - 12th, 2006)

- October 9th, 2006 (MON): 10:30 - 16:00 (West Indonesian Time GMT+7)
  AI3 / SOI Asia joint Operator Meeting
- October 10th, 2006(TUE): 9:00 - 18:30 (West Indonesian Time GMT+7)
  AI3 / SOI Asia site updates and AI3 research presentations / WGs
  (No Broadcasting for SOI Asia Steering Committee)
- October 11th, 2006 (WED): 9:00 - 17:00 (West Indonesian Time GMT+7)
  AI3 10th Anniversary & SOI Asia 5th Anniversary Joint Celebration
- October 12th, 2006 (THU): 9:00 - 16:30 (West Indonesian Time GMT+7)
  AI3 and SOI Asia Joint Directors Meeting

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3. AI3 & SOI Asia e-Global workshop
(October 9th - 12th, 2006)

- Overview: AI3 & SOI Asia workshop and e-learning
- Objectives
  - To achieve sustainable operation of SOI-Asia project
  - To train SOI-Asia operators to be able to operate SOI-Asia network, server and classroom environment (IPv6, SOI-AI3 network topo, Router configuration, SOI server management by hand-on experience)
- Action/Solution: Point to multipoint (broadcast the AI3 & SOI Asia Joint meeting 2006 Autumn using VIC/RAT and IRC)
- Members:
  - Vietnam: HUT, IOIT, VNU
  - Oversea: Keio university and SOI members (UCSY, ASTI, BUET, CHULA, ITB, ITC, TU, UNHAS, UNIBRAW, UNSRAT...)
- Equipment: Video Camera
- Bandwidth usage: 140Kbps/flow (Video+Audio)
- Environment: TEIN2
- Video/Audio: Using VIC/RAT (OSS) acceptable quality, suitable for low bandwidth environment

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4. SARS and Bird Flu Teleconference
(HMU, NHP, Kyushu Hospital, Nagasaki Hospital and Melbourne Royal Children Hospital)
(28th Oct 2006)

- Overview: SARS and Bird Flu Workshop
- Purpose: discussion and cooperation proposal
- Solution: Point to point
- Members: HMU, Melbourne Royal hospital, NOC-VN
- Equipment:
  - HMU: Sony IP camera (PCS-G50)
  - Melbourne Royal Children Hospital (RCH): Polycom IP camera
    HUT: Sony IP camera (PCS-G50)
- Bandwidth usage: 2Mbps
- Environment: TEIN2
- Video/Audio quality: HMU-HUT is acceptable

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Vietnam-Japan Workshop on SARS&BirdFlu

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5. HUT-KEIO Video Conferencing
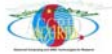### (2pm, 14th Nov 2006)

- Overview: Meeting HUT's Rector and HUT professors, other points are observers
- Purpose: Technical Demo and TEIN2's utility
- Solution: Video Conferencing (using Open Source Software - VIC/RAT): Point to multi-points
- Members: Keio Univ, HUT, AIT, IOIT
- Equipment:
  - HUT: Sony DVcam
  - Keio Univ, AIT, IOIT: Polycom DVcam
  - Bandwidth usage: 141Kbps
- Environment: TEIN2/VINAREN + SOI/AI3

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HUT-KEIO universities VC evaluation
(2pm, 14th Nov 2006)

- **Advantage:**
  - Point to multipoint
  - Free OS Software
  - Low bandwidth needed
  - IPv6 application
  - Suitable for low bandwidth environment
- **Disadvantage**
  - Acceptable (not high) Video/Audio quality
  - Good Video Camera needed
- **Trouble shooting**
  - **One point increase Video/Audio quality => Affect Audio/Video quality of other points.**
  - **Delayed and lost Video, only Audio works**

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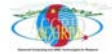
6. National Hospital for Pediatrics (NHP) and Melbourne Royal hospital
(2pm, 21st Nov 2006)

- Overview: In general program of International Pediatric Science Conference at HNP, 21st Nov. 2006
- Purpose: disease diagnosis
- Solution: Point to point
- Equipment:
  - NHP: Sony IP camera:
  - Melbourne Royal hospital: Polycom IP camera (MCU)
- Bandwidth usage: 2Mbps
- Environment: TEIN2

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7. NRENs Video Conference Testing by HK-POP of CERNET
(10AM, 22nd Nov, 2006)

08:45am KOREN(Korea)
09:00am SINET(Japan)
09:15am SingAREN(Singapore)
09:30am AARNet(Australia)
09:45am ASTI(Philippines)
10:00am ThaiREN(Thailand)
10:15am ITB(Indonesia)
10:30am VinaAREN(Vietnam)
10:45am MyREN(Malaysia)

Very successfully done!

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8. Other VC, Distance Learning, etc.

- Video Conferencing: Telemedicine between NHP-RCH on 8th Sept. 2006
- Tele-ichnography: NHP-France in Oct. 2006
- JAIST-HanoiInstitutions (IOIT, HUT, ColTech-VNU): Dec 5-6, 2006. Any time!
- Next: Paris 11, Osaka Univ., Gloriad/NFS, etc.
- Connected to APAN, AI3-SOI
- Connected to Kyoto, Besetoha, etc.

TEIN2-VN/VinaREN for You

- TEIN2&TEIN3 are good ICT frameworks/infrastructures for APEC, ASEM ICT-related activities
- TEIN2-VN/VinaREN is managed by the MOST, Vietnam
- Membership/Connectivity: by Your Institution to
  - NACESTI, MOST (24 Ly Thuong Kiet, Hanoi, Vietnam)
  - Dr. Ta Ba Hung (bhung@vista.gov.vn)
- Technical Support:
  - Email to NOC-VN@mail.hut.edu.vn (at HUT)
- Common Issues / Information:
  - Website: www.vinaren.vn; vinaren.vn.edu.vn; www.tein2.net
  - Email: tein2-vn@mail.hut.edu.vn
- Applications (within VN, between Countries):
  - Email to NOC-VN: noc-vn@mail.hut.edu.vn;
  - To TETF-VN: Nguyen Ngoc Binh (nnbinh@vnu.edu.vn); Tran Ba Thai (thai@netnam.vn,) Nguyen Kim Khanh (khanhnk@mail.hut.edu.vn)
  - Limitations: only inside TEIN2 and/or APAN/AI3-SOI
- WGs on Neurworking, Grid, Tele-medicine, Agriculture, Bioinformatics...

VinaREN/TEIN2/APAN's WGs: 5W1H?

- **Education and Trainings (for NOCs)**
- **Network Technology**
  - **Network Research**
  - **IPv6**
  - **Network Security**
  - **Network Engineering**
- **Application Technology**
  - **Grid Computing**
  - **Disaster Management**
  - **Medical Application**
  - **Bioinformatics (ASTRENA)**

- **Natural Resources**
  - **Earth Monitoring**
  - **AG/Field Server/Sensor**
- **e-* and Collaboration**
  - **Routing Coordination**
  - **Lambda BOF**
  - **Global Collaboration**
  - **e-Science**
  - **e-Culture**
- **Others**
  - **Digital Archives**
  - **Middleware**
  - **AI3/SOI activities**

APAN24 Meeting at Xi'an (China) Aug. 27-31, 2007

APAN Network Technology Area

	Director: Sureswaran Ramadass/USM	[sures@cs.usm.my]
IPv6 WG	Chair: Yan Ma/BUPT	[mayan@bupt.edu.cn]
Measurement WG	Chair: Yasuichi Kitamura/CRL	[kita@jp.apan.net]
Satellite WG	Chairs: Lim Seow San/TP	[seowsan@tp.edu.sg]
Lambda BoF	Co-chair: Jysoo Lee/KISTI,Akira Kato/JAIRC	[jysoo@kisti.re.kr], [kato@wide.ad.jp]
Security WG	Chair: Yoshiaki Kasahara/Kyushu, Co-Chair: Y. Kitamura / APAN-JP,	[kasahara@nc.kyushu-u.ac.jp] [kita@jp.apan.net]
SIP H323 WG	Chair: Quincy Wu	[solomon@ipv6.club.tw]

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APAN Application Technology Area

	Director: Koji Okamura/Kyushu University	oka@ec.kyushu-u.ac.jp
Medical WG	Chair: Shuji Shimizu,Co-Chair:Ho-Seong Han	[shimizu@surg1.med.kyushu-u.ac.jp],[hanhs@snubh.org]
HDTV WG	Chair: Jongwon Kim/GIST, Co-Chair: Micael Wellings	[jongwon@gist.ac.kr]
eScience WG	Chair: Lee Hing Yan/NGO,Deputy: Jon Lau	[hingyan@ngp.org.sg], [jonlau@ngp.org.sg]
Middleware WG	Chair: Yasuo Okabe,Co-Chair: James Sankar	[okabe@i.kyoto-u.ac.jp],[james.sankar@aarnet.edu.au]
e-Culture WG	Chair: Kameoka, Takaharu/Mie U, Co-Chairs:Faridah Noor Mohd, Noor/Malaya UKWON, Yong-Moo/KIST	[kameoka@mie-u.ac.jp], [faridahn@um.edu.my] [ymk@kist.re.kr]

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APAN Natural Resource Area

	Director: Suhaimi Napis / UPM	[suhaimi@putra.upm.edu.my]
Agriculture WG	Chair: Masayuki Hirafuji (NARO)	[hirafuji@affrc.go.jp]
Earth Monitoring WG	Co-chair: Pakorn Apaphant, Hirokazu Yamamoto (AIST) Vice-Chair:Chris Elvidge/NOAA,	[pakorn@gistda.or.th], [kathkath@ni.aist.go.jp] [Chris.Elvidge@noaa.gov]
Earth System WG	Co-chairs: Jai-Ho Oh/PKNU,Yihui Ding/NCC	[jhoh@pknu.ac.kr]

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Network Research Group

NetworkResearch	Chair: Jun Matsukata,Co-chair: Xing Li/CERNET	[jm@nii.ac.jp], [xing@cernet.edu.cn]

- **What?** Each Institution / Project considers to choose WG
- **Why?** Evaluate your ability, benefits, plans, …
- **Where?** In Vietnam, in TEIN2, in APAN, ASEAN/ASEM
- **When?** ASAP!
- **Who?** Your group leader, contact person
- **How?**
  - Your Research/Collaboration Plans
  - Contact VinaREN
  - Recommendation to the appropriate WG at TEIN2/APAN
  - Implementation
  - Evaluation/Reports and Innovation
- *How much?* Mainly by your institution/project

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TEIN2 Brochure

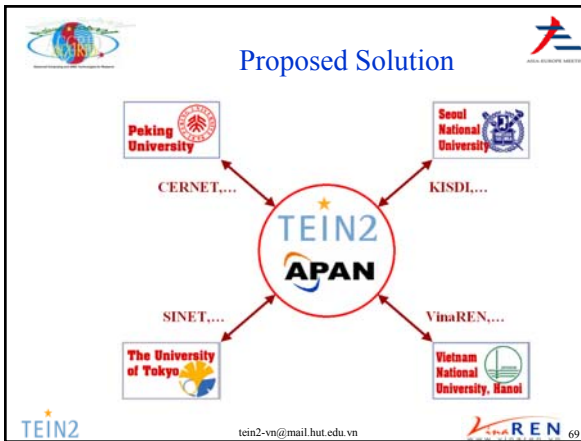TEIN2 – Powering Research and Education in Asia-Pacific.

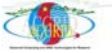Connecting East and West

DANTE   GEANT2
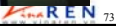
TEIN2 Brochure

BESETOHA with TEIN2/APAN

- Sharing the academic resources, including the OCW, e-references, etc.
- Organizing the online meetings among the BESETOHA Leaders (Beijing Univ.; Seoul Univ.; Tokyo Univ.; VNU, Hanoi)
- Performing the online lectures within the BESETOHA or for broadcasting to any network community such as TEIN2, APAN, AI3-SOI, etc.
- All the members of the BESETOHA can be connected to the TEIN2/APAN

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Proposed Solution

Peking University — CERNET,…
Seoul National University — KISDI,…
The University of Tokyo — SINET,…
Vietnam National University, Hanoi — VinaREN,…

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The President of Vietnam and the VNUH President at the VC with the JAIST President

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Online Open Ceremony of VNU-JAIST Office at the ColTech-VNUH

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Online Speech at the 6th Int'l InCoB2007 from HKUST (HongKong)

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Online Lectures at the AI3-SOI from Bandong (Indonesia)

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Conclusions

- TEIN2, APAN: Good Chances for the whole VN
  - Establishment of VinaREN for R&E Communities
  - New Connectivity for Academic & Research Institutions
  - Int'l Collaborations in S&T
  - Reduction of the digital divide
- TEIN2, APAN with the Advanced Technologies
  - IPv6, Networking Technologies, Monitoring, Security, …
  - Latest Equipment support by Cisco, Juniper, …
  - Joint Researches and Collaborations among NOCs and Experts
- TEIN2, APAN with an Open Policy: non-benefit and for Academic purposes; sustainable development plan (2006 - 2011)
- **TEIN2-VN/VinaREN's WGs as ICT-based WGs (Medicines, Grid Computing, e-*, etc.) of APAN/TEIN2: 5W1H?**
- Big Benefits for ASEM Countries' R&E Institutions

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Many Thanks to MOST, MOET, IOIT-VAST, HUT-MOET, VNU and Others!

Special Thanks to the DANTE and TEIN2 members!

Thank you!

TEIN2 Demo-video at the Break time

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