Activity Report of Asia-Pacific Medical Network Project in Kyushu University Hospital : Vol.8

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References 2
Reported press and others
1. Seattle Science Foundation · DVD, 2010
2. CESNET - Czech NREN Operator homepage, May 2011

Czech NREN Operator homepage, May 2011

Distributed concert

UltraGrid technology, developed by CESNET, enabled a unique concert in Ústí nad Labem. The musicians as well as the audience were divided by two microphones 190 km apart. Details are available in the press release.

Review of TNO 2011

The TEREHA Networking Conference 2011 ended in Prague on May 19. Czech NREN operators provided the key information regarding this important event. The TEREHA General Assembly concluded the conference.

TERENA Networking Conference 2011

We are hosting the TERENA Networking Conference 2011 - the largest European research networking conference in Prague from May 18th to 20th. For those of you who are not coming to Prague, streaming of all presentations is available.

Prague EUCePSIA meeting

From Wednesday, 15 May to Friday, 17 May, the 3rd meeting of the EUCePSIA, the European component of the International Grid Test Federation (IGTF), was held in Prague. The main aim of IGTF is to make the access to grid resources easier in the international environment. Further details are provided by our press release.

Networking Studies 2011

We remind you about submitting abstracts by 5 May 2011. It contains 15 selected technical papers from many research areas investigated by CESNET. The 2011 paper submission is available for downloading PDF.

e-infrastructure project launched

We launched the e-infrastructure project. The development of new information and communication systems created by the team of academic and research institutions will enable the e-infrastructure. Further details are provided by our press release.

TERENA Networking Conference 2011 contact tools

We are hosting the TNC2011 conference in two weeks. This significant conference focuses on future trends and its influence on science. Detailed Information is available in the new press release. The registration is still open.

YouTube

CTU REPORTS: TNC2011, Tuesday, May 17, 2011

TERENATube 42 件の動画  チャンネル登録

YouTube

CTU REPORTS: TNC2011, Tuesday, May 17, 2011

TERENATube 42 件の動画  チャンネル登録
4. CESKA TELEVIZE CT24 “MILENIUM”, Prague, May 18, 2011
5. Fukuoka Broadcasting System Corporation, May 29, 2011
VMMC and their big push for telehealth

Posted on: October 28th, 2011

The Veterans Memorial Medical Center (VMMC) once again tried a telehealth session assisted by the Philippine Research, Education and Government Information Network (PREGINET) last 26 October 2011 held at the VMMC Valdes Hall.

Said telemedicine session, dubbed as Phacoemulsification Conference 2011, was attended by different eye doctors in Metro Manila who are practicing Phacoemulsification Cataract Surgery. The conference was also participated in by Dr. Shuji Shimizu of the Kyushu University Hospital in Japan, as well as Mr. Renato C. Doctor, Officer-in-Charge of the Philippine Heart Center's Hospital Information System.

Dr. June Mendiola, Head of the VMMC Department of Ophthalmology said that it was their first time to tap the PREGINET in assisting VMMC in this big event. “Mr. Bayani Benjamin R. Lara of the Department of Science and Technology (DOST) introduced telehealth to VMMC which is not yet used in Phaco Conference,” said Dr. Mendiola.

Phaco Con 2011 being the first eye telehealth

Phaco Conference is a regular event staged by the Philippine Society of Cataract and Refractive Surgery. Usually, eye doctors bring their respective recorded surgery videos to show and share their experiences in Phacoemulsification Surgery. However, telehealth came into light in their last session in 2011 through the help of the PREGINET.

“We recognize the use of this telehealth, with the help of the DOST people, as an option to sustain the teleconferencing probably in the future [conferences] without moving from one place to another. We can stay in our respective hospitals or even in our respective homes through live streaming or video conferencing and continue discussing things without the need to travel,” Dr. Mendiola explained.
Dr. Shimizu commended the initiative of the VMMC and PREGINET in showcasing the very first eye telehealth because according to him, the Asia Pacific Advanced Network (APAN) only conducts telehealth on thorascopic, laparoscopic, endoscopic and oncological surgeries. He also said that the APAN would fervently welcome the next telehealth on eye surgery.

In time, the Philippine Society of Cataract and Refractive Surgery hopes to apply the telehealth technology in the Society’s future activities, specially, those that are beneficial for the learning of the eye doctors.

“We would like to thank the DOST people for assisting us in this event. This is very promising,” said Dr. Richard C. Kho of the American Eye Center.

**The PREGINET-assisted technologies**

Telehealth uses various technologies such as telephones, satellite technology, and videoconferencing facility to remotely consult with the specialists or diagnose patients.

In the Phaco Conference 2011, the PREGINET gave technical assistance on the following technologies:

- **Videoconferencing.** The PREGINET had an H.323 videoconferencing with the Kyushu University and Philippine Heart Center in Manila.
- **Video Streaming.** A live streaming was done and the eye doctors who were not present at the event could view the session via mobile devices.
- **Digital Video Transport System (DVTS).** DVTS, which is a free and open source software, was used by PREGINET to deliver the live surgery in the operating room. This was done by using the current VMMC network infrastructure and a sending machine that used Ubuntu Linux as its operating system.

“This is the same technology being used by advanced research networks in doing telemedicine across the globe. I am glad the ophthalmology doctors in VMMC took the initiative of working with us and adapting it to a government hospital setting,” said PREGINET Multimedia Engineer Alvin M. de Gracia.
Endoscopy attachment in Japan

Norwani BASIR,
Division of Gastroenterology and Hepatology, Department of Medicine,
RIPAS Hospital, Brunei Darussalam

I had the wonderful opportunity to go to Japan under the sponsorship of Kyushu University Hospital, Fukuoka Japan (Panel) for a two week endoscopy attachment (6th September to 20th September 2011). The Department of Diagnostic and Therapeutic Endoscopy of Kyushu University Hospital, Fukuoka won a grant to sponsor trainees from the Asia-Pacific region to be attached in their endoscopy centre.

Fukuoka, or Hakata, is a fairly modern and the largest city located on the northwest of Kyushu. Voted number 14 in 2010’s poll of the World’s most livable cities, Fukuoka is praised for its green spaces in a metropolitan setting. Divided into two areas by the Nakasu river, Hakata is the business district, and Tenjin the shopping district, the Japanese version of Oxford Street, London.

On the day I arrived, I went to Kyushu University Hospital (15 minutes by subway) and met Professor Shuji Shimuzu who was in charge of the programme. I was informed that they have 15 doctors who come annually for attachment. I was introduced to other trainees in the programme from Thailand, Singapore, South Africa, New Zealand, Indonesia at different levels of their training and was given timetable for my two week stay.

The attachment started at 9am and usually finished by 5.30pm. The hospital is a new and modern and has its chain American coffee branch and Subway restaurant in the foyer. A cheaper option for lunch is at the students’ union building, which sells okay-food for 380 yen (BND $6), the cheapest meal I ever had during my stay. The endoscopy suite is a well equipped, contemporary unit with eight procedure rooms and a very comfortable waiting area. It has a separate medical data room where all digitalised images from the procedures are collated and reported.

Japan has the highest incidence of Gastric cancer. Hence, early gastric cancer screening is patient. Endoscopic intubation is performed up to
third part of the duodenum and viewed meticulously with white light endoscopy. For each procedure, up to 40 images are captured. The endoscopist will then perform chromoendoscopy with indigo carmine and areas that are not taken up by the dye will be evaluated with a mini-probe Endoscopic Ultrasound (EUS) and Narrow Band Imaging (NBI). Morning sessions are dedicated to early gastric cancer (EGC) screening with 30 procedures per day carried out. Afternoons are usually booked for colonoscopies (what amazing bowel preparations!), and therapeutic endoscopies such as Endoscopic Submucosal Dissections (ESD) and Endoscopic Mucosal Resections (EMR). Language was not a problem as the endoscopists speak good English and taught us during the procedures.

The endoscopists, like in Brunei Darussalam, comprise of both the gastroenterologists and the surgeons. In Japan, the radiologist with a GI interest also performs endoscopy. I spent a day at Fukuoka University Chikushi Hospital with Professor Kenshi Yao, the pioneer of Magnification Endoscopy. A gastroenterologist by profession, he is also a cum radiologist and pathologist, performing barium studies and looking into specimens that he had resected or biopsied.

I was also attached to the Osaka Medical Centre for cancer and cardiovascular diseases under the supervision of Professor Noriyuki Uedo, the person who made this Japan attachment possible. Transportation was sponsored and used the Shinkansen, (bullet train that travels up to 300km/hr) costing $415. He and his team were very helpful and taught the basic techniques of ESDs, EMRs and Auto Fluorescence Imaging (AFI). Apart from arranging accommodation, Professor Uedo also took his time to bring me around Nara and Kyoto during the weekend.

Had I been able to stay for a month, I would have spent a few days at the National Cancer Centre Tokyo. Overall, I have learnt a great deal, procedures that we don’t do in Brunei Darussalam and rarely done even in Singapore. This experience has exposed me to the advance diagnostic and therapeutic techniques that are available in Japan, and not currently used in Brunei Darussalam. Japan, being the forefront in the endoscopic field, has taught me the importance of using different diagnostic techniques to achieve precise diagnosis especially in early gastric cancer screening. Chromoendoscopy, Magnification Endoscopy with NBI, AFI, interventional EUS are a few of many I have learnt during my short stay, together with different therapeutic techniques such as ESD, EMR, oesophageal dilatation (CRE-TTS method) and Photodynamic therapy.

I am very grateful to Professor Shuji Shimizu of Kyushu University Hospital for the opportunity and privilege to come as a visiting scholar. It was an honour to have been taught by Professor Kenshi Yao and to Professor Noriya Uedo for imparting valuable knowledge and generosity. I hope some of the techniques will be introduced to Brunei Darussalam. As this is a yearly programme, budding endoscopists (physicians and surgeons) have this wonderful opportunity, at the same time to enjoy the wonderful and rich culture and language of the land of the rising sun.
8. NHK, February 16, 2012
### Medical Institutions connection list of telemedicine (1/3)

#### Tele-Medicine Development Center of Asia (TEMDEC)

#### Medical Institutions & Universities

<table>
<thead>
<tr>
<th>Nation</th>
<th>Medical Institution</th>
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| Japan     | • Kyushu University Hospital  
• National Cancer Center (Tokyo)  
• Sapporo Medical University  
• Iwate Medical College  
• Nagasaki University  
• Fujimoto-Hayasuzu Hospital  
• Kyoto Second Red Cross Hospital  
• Tokyo Medical and Dental University  
• Japanese Red Cross Kyushu International College of Nursing  
• Tomishiro Central Hospital  
• Oita University  
• Fukuoka University  
• Kyoto University  
• Sapporo Tokushukai medical center  
• Yamaguchi University  
• Tokai University  
• University of Occupational and Environmental Health,  
• Fujita Health University Hospital  
• J&J Medical Innovation Training Center (MIT)  
• The Cancer institute Hospital of JFCR  
• Tokyo Science foundation (TSF)  
• Kobe University  
• Hokkaido University  
• Hiroshima University  
• Saga University  
• National Center for Child Health and Development  
• Shonankamakura General Hospital  
• Gifu University  
• The University of Tokushima  
• Kanazawa University  
• Tohoku University Hospital*  
• Gunma University Hospital*  
• University of Tokyo Hospital  
• Niigata University Hospital*  
• Nagoya University Hospital*  
• Mie University Hospital*  
• Osaka University Hospital  
• Tottori University Hospital*  
• Ehime University Hospital*  
• Kumamoto University Hospital*  
• Kagoshima University Hospital*  
• Kyushu University Beppu Hospital  
• Kyushu University Ito Campus*  
• Kagawa University Hospital* |
|           | (subtotal 44 institutions)                                                        |
| Korea     | • Hanyang University  
• National Cancer Center, Korea  
• Ewha Womans University  
• Seoul National University  
• Chungnam National University  
• Gyeongsang National University  
• Seoul National University Bundang Hospital  
• Korea University  
• Yongsei University  
• Chungbuk National University  
• Cheju National University  
• Asan medical center  
• St. Mary’s Hospital  
• Konkuk University  
• Chonnam National University  (subtotal 15 institutions) |
| China     | • Tsinghua University  
• Shanghai Jiaotong University affiliated Shanghai First People’s Hospital  
• The Chinese University of Hong Kong  
• Peking University  
• Peking Union Medical College Hospital  
• CTEC  
• Xijing Hospital  
• Prince of Wales Hospital  
• University of Hong Kong  
• Zhejiang University  
• Fudan University Zhongshan Hospital  
• (subtotal 11 institutions) |
| Taiwan    | • Taipei Veterans General Hospital  
• Taichung Veterans General Hospital  
• National Taiwan University  
• National Central University  
• Taipei Medical University  
• Kaohsiung Medical University Chung-HO Memorial Hospital  
• (subtotal 6 institutions) |
| America   | • University of Hawaii  
• Stanford University  
• Florida International University  
• University of California, Irvine  
• University of Wisconsin  
• Medical University of South Carolina  
• (subtotal 6 institutions) |
| Australia | • Flinders University  
• The Australian National University  
• Concord Hospital  
• Royal North Shore Hospital  
• Royal Brisbane Hospital  
• Westmead Hospital  
• (subtotal 6 institutions) |
# Medical institutions connection list of telemedicine (2/3)

Tele-Medicine Development Center of Asia (TEMDEC)

## Medical Institutions & Universities

<table>
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| Thailand | Siriraj Hospital, Mahidol University  
Chulalongkorn University  
Rajavithi Hospital  
Pramongkutklao Hospital  
(subtotal 4 institutions) |
| Singapore | Singapore National University  
(subtotal 1 institution) |
| Vietnam | National Hospital of Pediatrics  
Bach Mai Hospital  
Hospital No 108  
Choray Hospital  
Viet Duc Hospital  
Hue University Hospital*  
(subtotal 6 institutions) |
| Indonesia | Institut Teknologi Bandung  
University of Indonesia  
(subtotal 2 institutions) |
| Philippines | University of the Philippines Diliman  
University of the Philippines Manila  
Advanced Science and Technology Institute  
Veterans Memorial Medical Center  
Philippine Heart Center in Manila  
(subtotal 5 institutions) |
| Malaysia | University of Malaya  
University Malaysia Sabah*  
Hospital Tengku Ampuan Afzan Kuantan*  
National University of Malaysia*  
(subtotal 4 institutions) |
| India | Tata Memorial Hospital  
Chhatrapati Shahar Jay Maharaj Medical University  
Asian Institute of Gastroenterology  
The Institute of Liver and Biliary Sciences  
(subtotal 4 institutions) |
| Germany | University Medical Center Hamburg-Eppendorf  
(subtotal 1 institution) |
| France | Universite Bordeaux 2  
Paul Brosse Hospital  
(subtotal 2 institutions) |
| Italy | Roma Tre University  
Monaldi Hospital  
(subtotal 2 institutions) |
| New Zealand | Auckland University  
(subtotal 1 institution) |
| Czech | Czech Technical University of Prague  
Central Military Hospital in Prague  
Masaryk Hospital Usti nad Labem  
(subtotal 3 institutions) |
| Spain | Hospital Clinic I Provincial De Barcelona  
University of Malaga  
World Institute for Digestive Endoscopy Research in Barcelona  
(subtotal 3 institutions) |
| Egypt | Cairo University  
(subtotal 1 institution) |
| Norway | St Olavs University Hospital  
(subtotal 1 institution) |
| Brazil | University San Paolo Ribeirao Preto  
(subtotal 1 institution) |
| Mexico | Universidad Nacional Autonoma de Mexico  
(subtotal 1 institution) |
| Morocco | Mohamed V Souissi University  
(subtotal 1 institution) |
| South Africa | University of the capetown  
(subtotal 1 institution) |
| Fiji | Fiji National University*  
(subtotal 1 institution) |
| United Kingdom | All Nations Centre, Cardiff*  
(subtotal 1 institution) |

*Only connected by H323 or Vidyo.

Total: 27 Nations 134 institutions
## Medical institutions connection list of telemedicine (3/3)

### The Other institutions

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<tr>
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| Japan         | • Fukuoka International Congress Center  
|               | • ACROS Fukuoka  
|               | • Pacifico Yokohama  
|               | • Akihabara DAIBIRU  
|               | • Fukuoka Sunpalace  
|               | • National Institute of Information and Communications Technology  
|               | • Sapporo Convention Center  
|               | • West Japan General Exhibition Center  
|               | • Shonan Village Center  
|               | • APAN-JP Tokyo office  
|               | • Vidyo Japan*  
|               | (subtotal 11 institutions)                                                  |
| Korea         | • Hotel Inter-Burgo in Daegu  
|               | • Grand Hilton Seoul Hotel  
|               | • Korea Telecom  
|               | • Lotte Hotel Seoul  
|               | • Shilla Hotel Seoul  
|               | • Sheraton Grande Walkerhill Seoul  
|               | (subtotal 6 institutions)                                                  |
| China         | • Sherraton Xian Hotel  
|               | • Beijing International Congress Center  
|               | • Hong Kong Convention and Exhibition Centre  
|               | • Johnson & Johnson Beijing  
|               | (subtotal 4 institution)                                                   |
| Taiwan        | • The Howard Plaza Hotel Taipei  
|               | • Grand Hi-Lai Hotel  
|               | (subtotal 2 institutions)                                                  |
| America       | • Seattle Science Foundation  
|               | • Hyatt Regency San Antonio  
|               | • Renaissance Atlanta Waverly Hotel  
|               | (subtotal 3 institution)                                                   |
| Australia     | • Hilton Cairns Hotel  
|               | • venue of AARNet3 launch ceremony  
|               | • Medic Vision Australia  
|               | • CSIRO ICT Centre  
|               | • AARNET Sydney Office  
|               | • InterContinental Sydney  
|               | • Hilton Sydney Hotel  
|               | (subtotal 7 institutions)                                                  |
| Thailand      | • Amari Watergate Hotel  
|               | • Queen Sirikit National Convention Center  
|               | • The Empress Convention Centre  
|               | (subtotal 3 institutions)                                                  |
| Vietnam       | • ASEM venue in Halong Bay  
|               | • Melia Hanoi Hotel and Convention Center  
|               | • National Agency for Science and Technology Information (NASATI)  
|               | (subtotal 3 institution)                                                   |
| Philippines   | • Edsa Shangri-la Hotel  
|               | (subtotal 1 institution)                                                   |
| Malaysia      | • MYREN-NOC  
|               | • Berjaya Times Square Hotel  
|               | (subtotal 2 institutions)                                                  |
| India         | • ERNET Mumbai  
|               | • ERNET New Delhi  
|               | • India Habitat Centre  
|               | (subtotal 3 institution)                                                   |
| Italy         | • GARR-NOC  
|               | • Auditorium del Massimo  
|               | (subtotal 2 institutions)                                                  |
| Belgium       | • TERENA venue in Bruges  
|               | (subtotal 1 institution)                                                   |
| New Zealand   | • Millennium Hotel Queenstown  
|               | (subtotal 1 institution)                                                   |
| Egypt         | • Theodor Bilharz Research Institute  
|               | (subtotal 1 institution)                                                   |
| Czech         | • Clarion Congress Hotel  
|               | • ČESNET  
|               | (subtotal 2 institution)                                                   |
| Lithuania     | • Reval Hotel Lietu  
|               | (subtotal 1 institution)                                                   |
| Chile         | • Red Universitaria Nacional (REUNA)  
|               | (subtotal 1 institution)                                                   |

(The Other Institutions)

**Total:** 18 Nations 54 institutions

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*Only connected by H323 or Vidyo.*
### H.323 list

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※○: H.323 system is available   ×: H.323 system is not available

**H.323 MCU (Multipoint control unit)**

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※Please send the update information to TEMDEC when available.
List of Foreign Researchers (doctors and engineers), 2003-2011

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※2009: From India (Nationality: Republic of Trinidad and Tobago)

※2011: From Morocco (Nationality: Republic of Benin)
Greeting from Director

The purpose of TEMDEC is to organize attractive and useful remote education and consulting programs in Asia by taking full advantage of high-speed telecommunications. New medical knowledge is shared continuously across the geographic barriers.

With reliable and skilled translators, between medical staff and nursing people, we are now escalating our activities from consultation, demonstration to medical and nursing conferences.

We sincerely appreciate your kind cooperation and great support.

Masa Takeda, MD, Ph.D, FACS
Dec. 2011

References 2
Others

Leaflet
About TEMDEC

Aim
The aim of this center is to establish effective and consistent medical communications among Asian countries using super-fast Internet and advanced technology.

Main activity
- Remote medical education
- Videoconferences and preparations for the event
- Tele-consultations and arrangements for international patient care
- Development and application of new technology
- Development of attractive content
- Secretariat of Medical Working Group of Asia-Pacific Advanced Network
- Centre for international exchange programs
- Invitation of foreign medical doctors and engineers

History
Our telemedicine activity started in 2002, when Korea Japan co-hosted World Cup Soccer Games, and those two countries were connected with a big optic fiber. “Genki project” was organized by industries, governments and academic groups in order to accelerate the mutual remote communications in various fields such as education, culture, business, and medicine. TEMDEC was formally established in Kyushu University Hospital in 2008.

Telemedicine conference room
Since April 2010, a new teleconference room has been installed with a variety of the latest equipment, such as DVTS, Polycom, Vidyo, High Definition Streaming.

Activities

Technologies

- DVTS
  - Digital Video Transport System
- H.323 Video Conference System
  - Polycom, Sony, Lifesize, Jansberg...
- H.264/SVC Vidyo Conferencing System
  - Client server style video conferencing software
- HD-SCR
  - High Definition Streaming Combined Remote conference system
- Tele-pointer
  - Remote pointing system for telepresence

Medical Working Group - APAN

APAN
APAN (Asia-Pacific Advanced Network) is a non-profit international consortium established in 1997. APAN is designed to be a high-performance network for research and development on advanced next-generation applications and services.

Medical Working Group
Medical Working Group was organized in 2005, and Kyushu University Hospital has been secretariat for all telemedicine activities.