

REPORT ON TELEMEDICINE TRAINING

27TH JULY 2015 – 21ST AUGUST 2015

TELEMEDICINE DEVELOPMENT OF ASIA (TEMDEC)
KYUSHU UNIVERSITY HOSPITAL,
FUKUOKA, JAPAN

Presenter:

Gunjan Ranjitkar

**Institute of Medicine (IOM), Department of Information
Technology (DIT), Tribhuvan University Teaching
Hospital (TUTH), Maharajgunj,
Kathmandu Nepal**



Institute of Medicine (IOM)

- ❑ Established in 1972 under Tribhuvan University
- ❑ Within the first decade of its establishment, it developed a total of 12 campuses scattered over the country.
- ❑ The programs for this purpose were:
 - ❑ ANM and CMA
 - ❑ Proficiency Certificate Course in General Medicine
 - ❑ Pharmacy
 - ❑ Radiology
 - ❑ Physiotherapy
 - ❑ Nursing
 - ❑ Health Laboratory
 - ❑ Traditional Medicine





Tribhuvan University Teaching Hospital

- ❑ Established in 1983 with the generous support of Japanese Government.
- ❑ Inaugurated in 1986, February by Late King Birendra Bir Bikram Shah Dev.
- ❑ An integral part of the Institute of Medicine of Tribhuvan University.
- ❑ Objectives is to facilitate the education, research and health care.
- ❑ Provides practical field for the academic training programs (basic, graduate and postgraduate)
- ❑ Conducts medical research projects and provides a major inspiration to Biomedical and Health Sciences Research in Nepal.



TUTH Teaching Hospital before construction





Year 1983 at a glance in support with JICA

Under construction



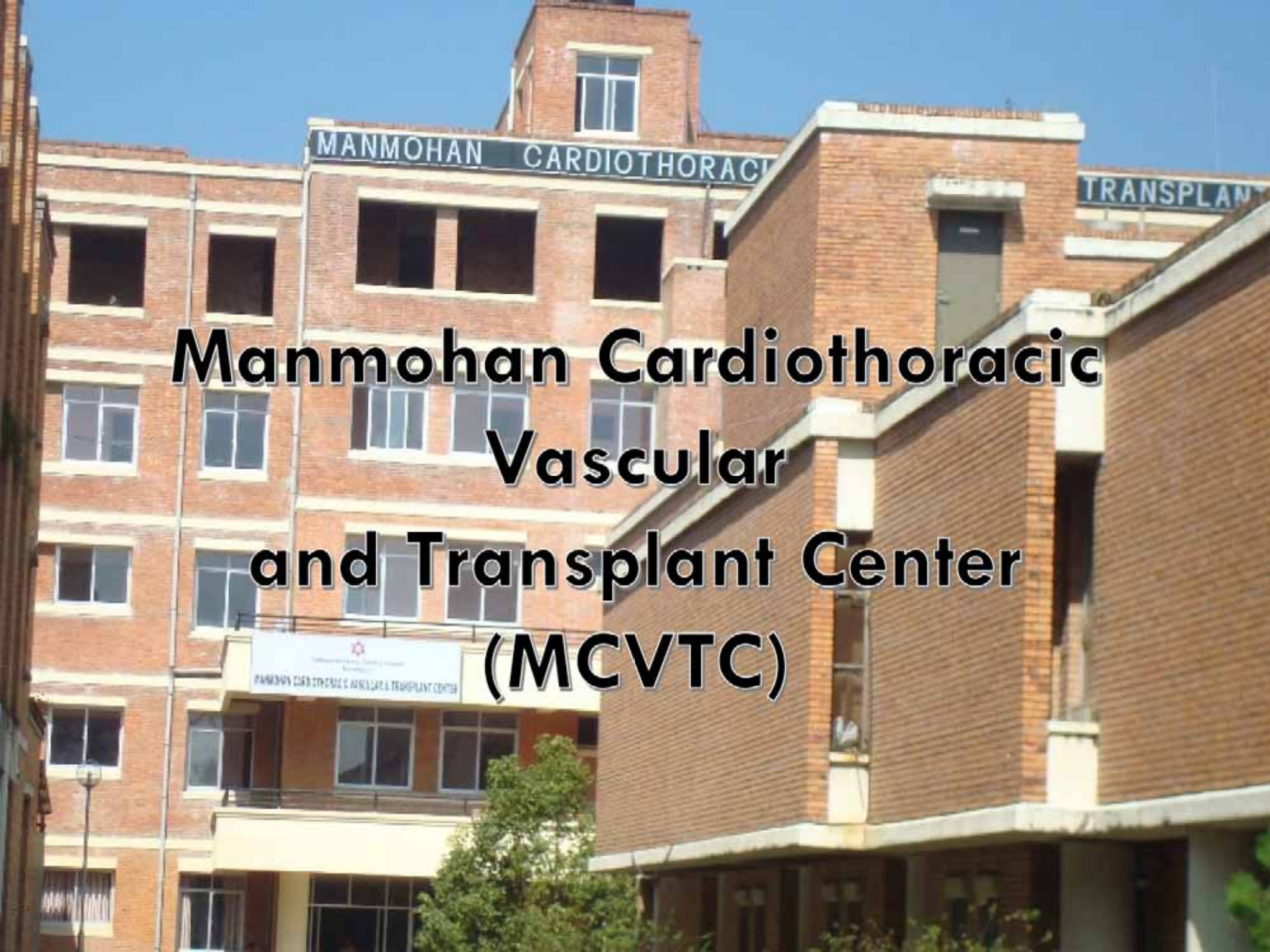
Tribhuvan University Teaching Hospital (TUTH)

At present





BP Koirala Centre for Ophthalmic Studies



**Manmohan Cardiothoracic
Vascular
and Transplant Center
(MCVTC)**

MANMOHAN CARDIOTHORACIC VASCULAR & TRANSPLANT CENTER



Committees of the Dean Office

- ❑ Management and Development Council
- ❑ Implementation Committee
- ❑ Faculty Board
- ❑ Faculty Board Standing Committee
- ❑ Monitoring Committee
- ❑ Subject Committees
- ❑ Research Committee
- ❑ Institutional Review Board (IRB)

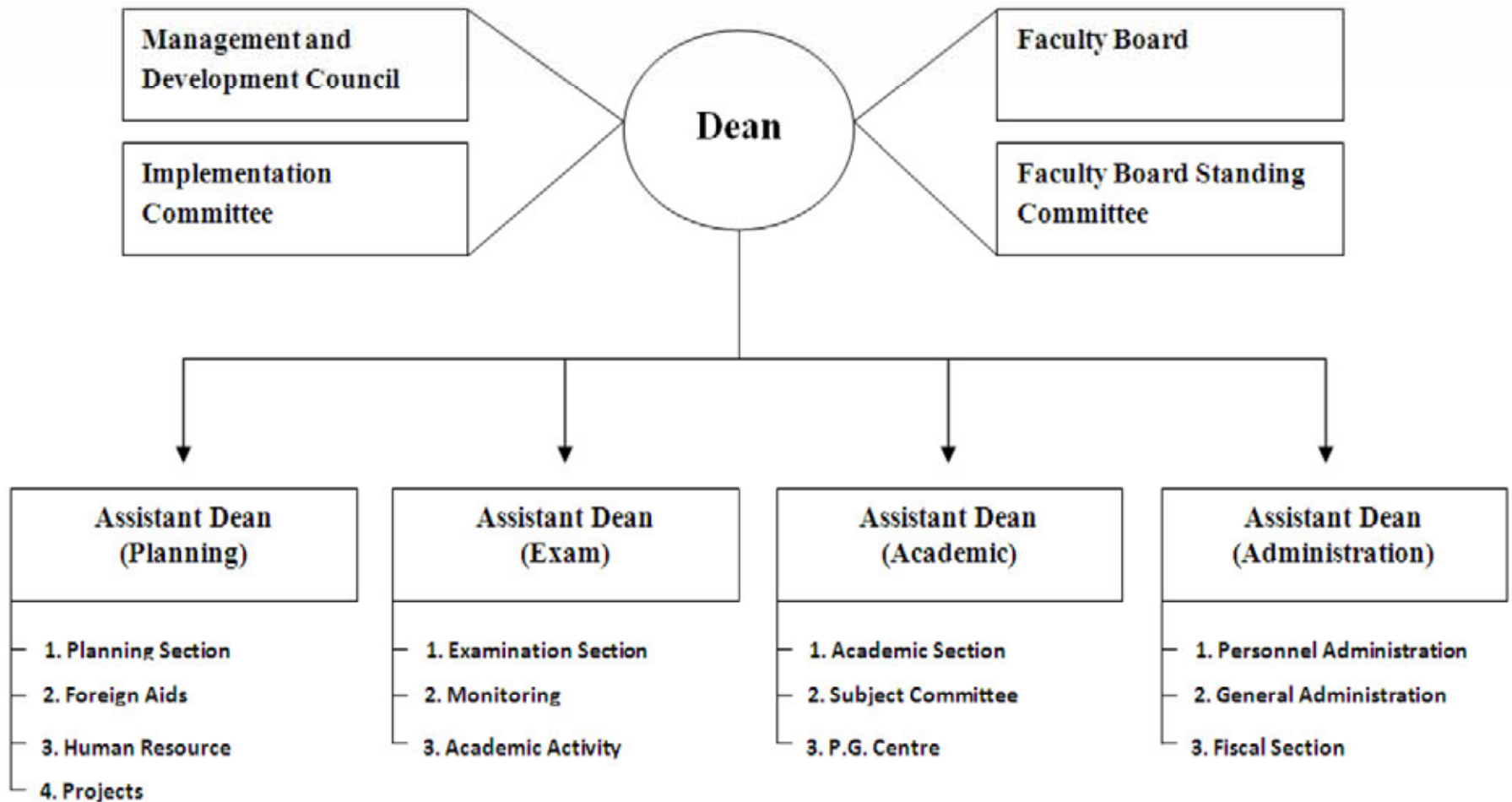


Other Activities of IOM

- Journals of Institute of Medicine (JIOM)
- National Care for Health Professionals Education (NCHPED)
- IOM – College of Physicians and Surgeons Pakistan (CPSP) Linkage Program
- Hospital Preparedness for Emergencies (HOPE)



Organogram of Dean's Office





Department of Information Technology (DIT)



Prof. Dr. Pradeep Vaidya
Director Of
**Department of Information
Technology (DIT)**

- ❑ Established in the purpose of assisting IOM's main goals: excel in Medical Education, Service and Research.
- ❑ DIT also provides cheapest and fastest internet connection to all the departments, wireless internet service in IOM premises only.
- ❑ Free internet connections for faculties, library hall and DIT premises
- ❑ Wired and wireless internet connections desktop computers, personal laptops, mobile devices.

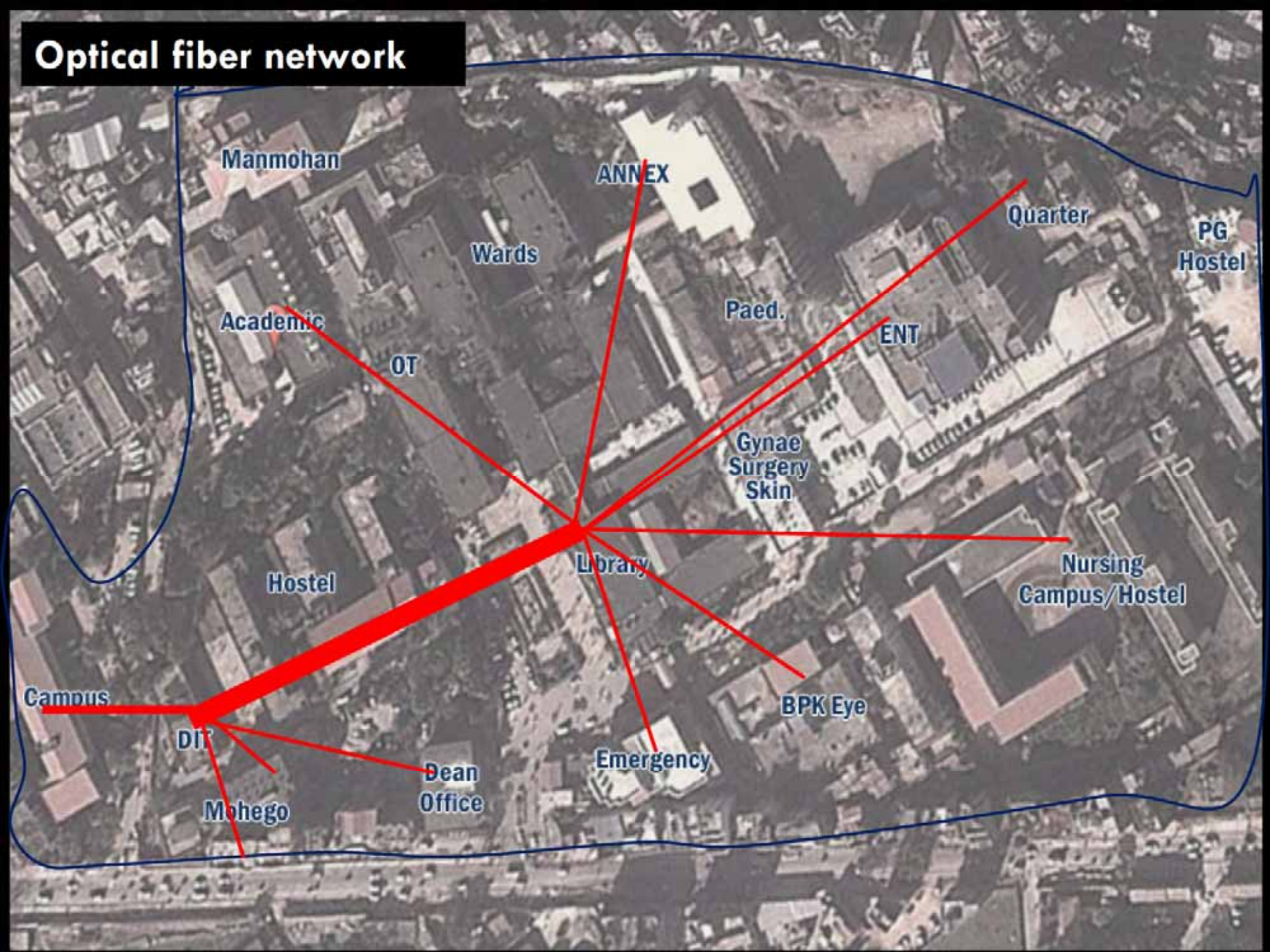
- ❑ **Online Examination and Admission Form**
 - ❑ PCL Online Form
 - ❑ MBBS (Bachelor of Medicine and Bachelor of Surgery) Online Form
 - ❑ PG (Post Graduate) Online Form
 - ❑ MCh/DM Online Form
 - ❑ Mobile SMS Notification to get the information of the Exam Venue, Exam hall, Result of the students.
 - ❑ PCL Online-Admission Form
 - ❑ MBBS Online-Admission Form
 - ❑ PG (Post Graduate) Online-Admission Form
 - ❑ MCh/DM Online-Admission Form
 - ❑ Faculty Position Online Application



Website hosted by IOM-DIT

1. iom.edu.np
2. iomdit.org.np
3. jiom.com.np
4. teachinghospital.org.np
5. fsuiom.org.np
6. gpemdeptom.edu.np
7. healthprospect.org
8. nchped.org.np
9. tumorboard.org.np
10. nmss.org.np
11. hospicenepal.org.np
12. nossnepal.com.np
13. mcvtc.org.np
14. nphss.org.np
15. tuthsurgery.org
16. npss.edu.np
17. enttuth.org.np
18. orthotuth.org.np
19. prsharma.com.np

Optical fiber network



Wifi-Management System



Security IP-Camera



Image © 2015 CNES / Astrium
© 2015 Google

Google earth

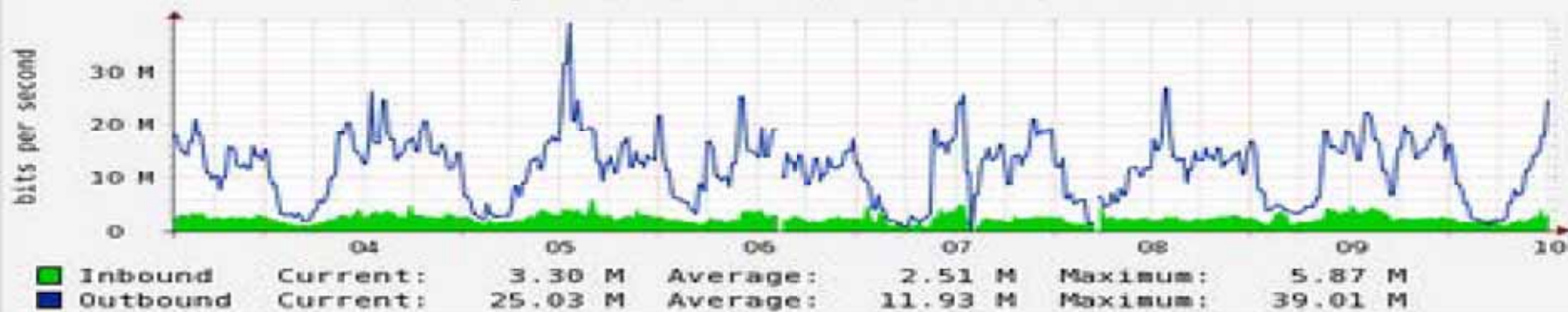
Hourly Graph

sw-edg-btr-01 - Port12 - I027-K01-01



Daily Graph

sw-edg-btr-01 - Port12 - I027-K01-01



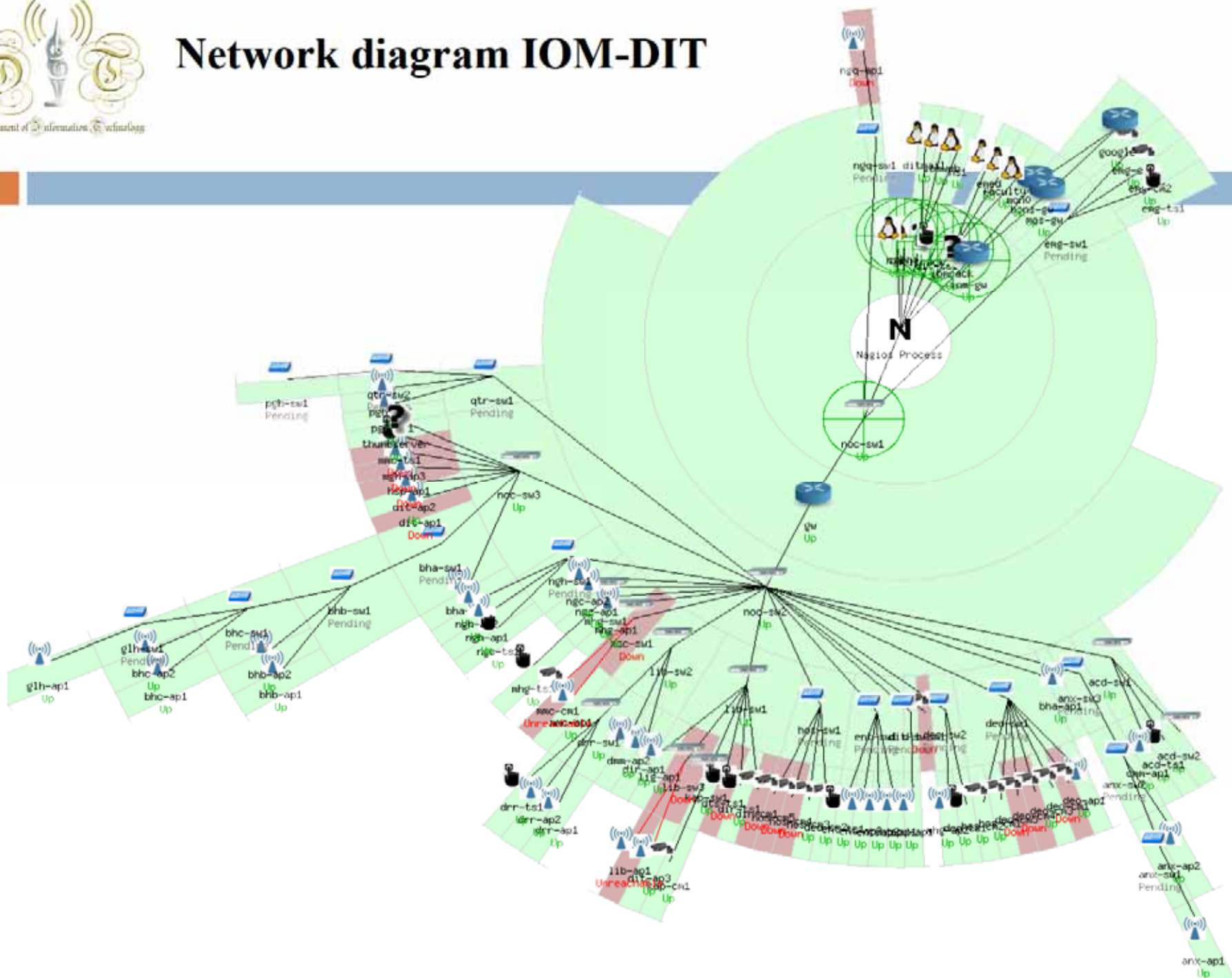
Weekly Graph

sw-edg-btr-01 - Port12 - I027-K01-01

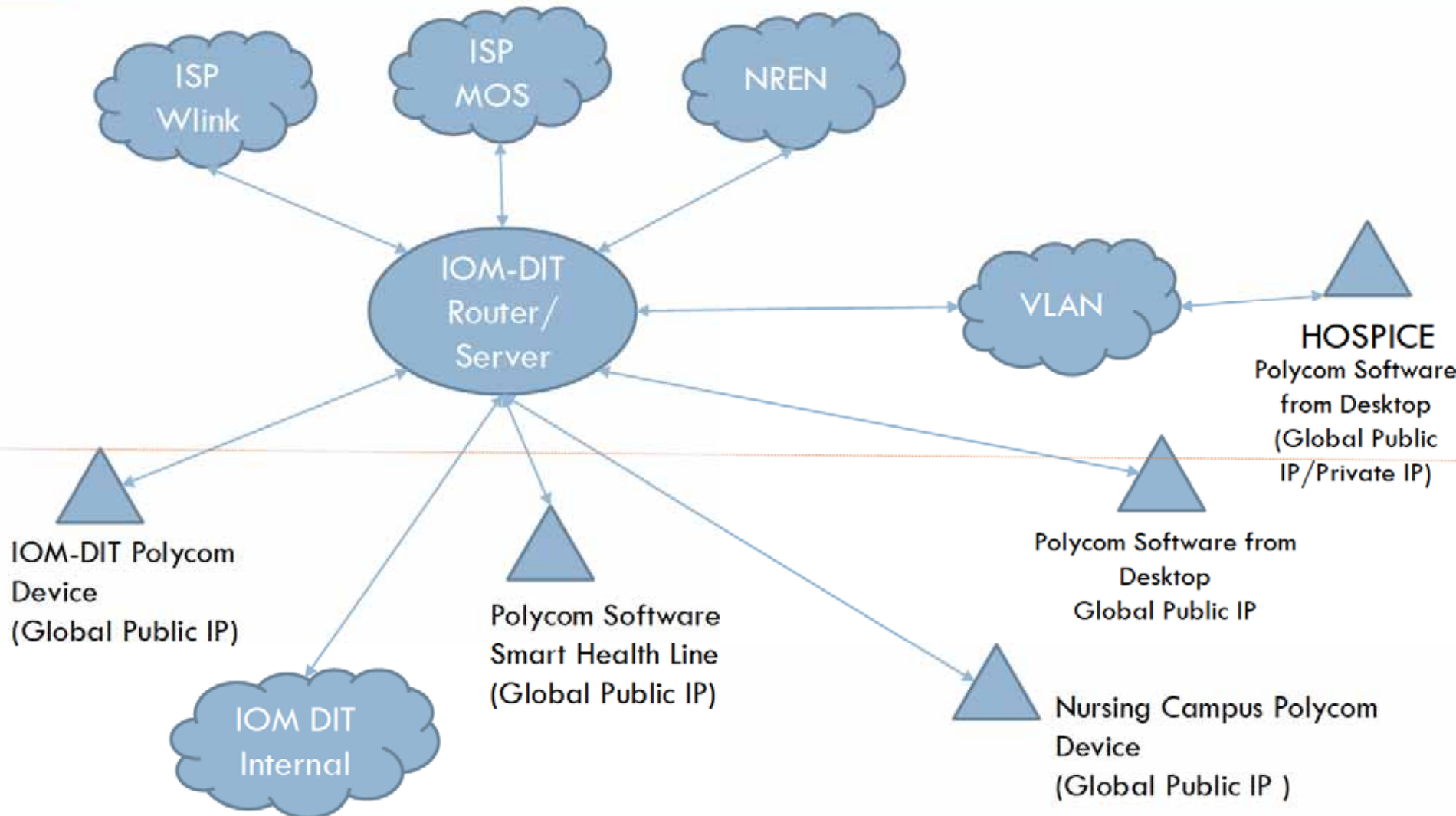




Network diagram IOM-DIT



Telemedicine connection in IOM-DIT



Polycom Software and devices we use in IOM-DIT



polycom Realpresence group 500



i5 computers and laptops for VC



polycom vsx 7000



VIDEO CONFERENCING

- ❑ Advance Computer Training Class to People's Dental College, Kathmandu
- ❑ Video Conferencing with Janakpur
- ❑ First Aid Training for Psychiatric
- ❑ IT training for Dental doctors
- ❑ Disaster Management training for Nurses
- ❑ Palliative Care Training for Doctors & Nurses



Advance Computer Training Class, People's Dental College





Video Conference with Janakpur



Palliative care class to staff of Model Hospital





Palliative care class conducted with HOSPICE

Pain Types and Syndromes

Type of Pain	Features
Acute pain	Pain usually concordant with degree of tissue damage, which remits with resolution of the injury <i>Adaptive, beneficial response necessary for the preservation of tissue integrity.</i>
Chronic pain	Low levels of identified underlying pathology that do not explain the presence and/or extent of the pain <i>Pain that has outlived its usefulness</i>
Cancer pain	Strong relationship between tissue pathology and levels of pain Limited time frame that permits aggressive pain management Rarely involves medical-legal or disability issues
CNCP	Weak relationship between tissue pathology and pain levels Prolonged, potentially life-long, pain May involve medical, legal, disability issues/conflicts, work or relationship problems, physical deconditioning, psychological symptoms (e.g. Osteoarthritis & Low back pain)
CPS	Preoccupation with somatic functioning Lifestyle centered on seeking immediate pain relief, with excessive, nonproductive, and often nonproductive care services Repeated attempts to obtain pain-related financial compensation (e.g., Social Security, Veterans' benefits) Numerous symptoms and signs of psychosocial dysfunction that the patient attributes to the pain (e.g., anger, depression, anxiety, substance abuse, disrupted work or personal relationships)





Tribhuvan University Teaching Hospital to HOSPICE Nepal, Lagankhel, Patan





Video Conference with Sanjay Gandhi Medical College, India





Video Conference with USA along with US Embassy staff, Nepal



Dental Training at DIT

Materials and Methods

- As the name implies, the materials and methods used in the experiments should be reported in this section.
- The difficulty in writing this section is to provide enough detail for the reader to understand the experiment without overwhelming him or her.
- When procedures from a lab book or another report are followed exactly, simply cite the work, noting that details can be found in that particular source.
- It is still necessary to describe special pieces of equipment and the general theory of the assays used.
- This can usually be done in a short paragraph, possibly along with a drawing of the experimental apparatus.





Two Day Disaster Nursing Class with 9 countries Hosted by Japan





Two Day Disaster Nursing Class with 9 countries Hosted by Japan





About Telemedicine Development Center of Asia (TEMDEC)

- Started in 2002, when Korea-Japan co-hosted World Cup Soccer Games and these two countries were connected with a big optic fiber.
- Kyushu University Hospital joined it as a medical team
- “Asia-Kyushu Advanced Medical Network (AQUA)” which was organized in 2005.
- Telemedicine Development Center of Asia (TEMDEC), in October 2008, and it takes over the role of AQUA to lead international telemedicine.
- To establish effective and consistent medical communications among Asian countries using super-fast Internet and advanced technology.

Roles of TEMDEC

- Remote medical education:
- Remote patient care:
- Development and application of new technology:
- Development of attractive contents:
- Secretariat of Medical Working Group of Asia-Pacific Advanced Network: <http://apan.net/>
- Center for international exchange programs:

What I learned in TEMDEC, Kyushu University, Fukuoka, Japan

□ DVTS: Digital Video Transport System

- Requirements of DVTS
- SD-quality, 30Mbps
- PC/Laptop with Firewall Port
- Converters; has to be Analog to Digital converter
- Display Screen
- Camcorder for Recorder
- Mic and Speakers
- Mixer for Mic and Speakers
- Software is Free

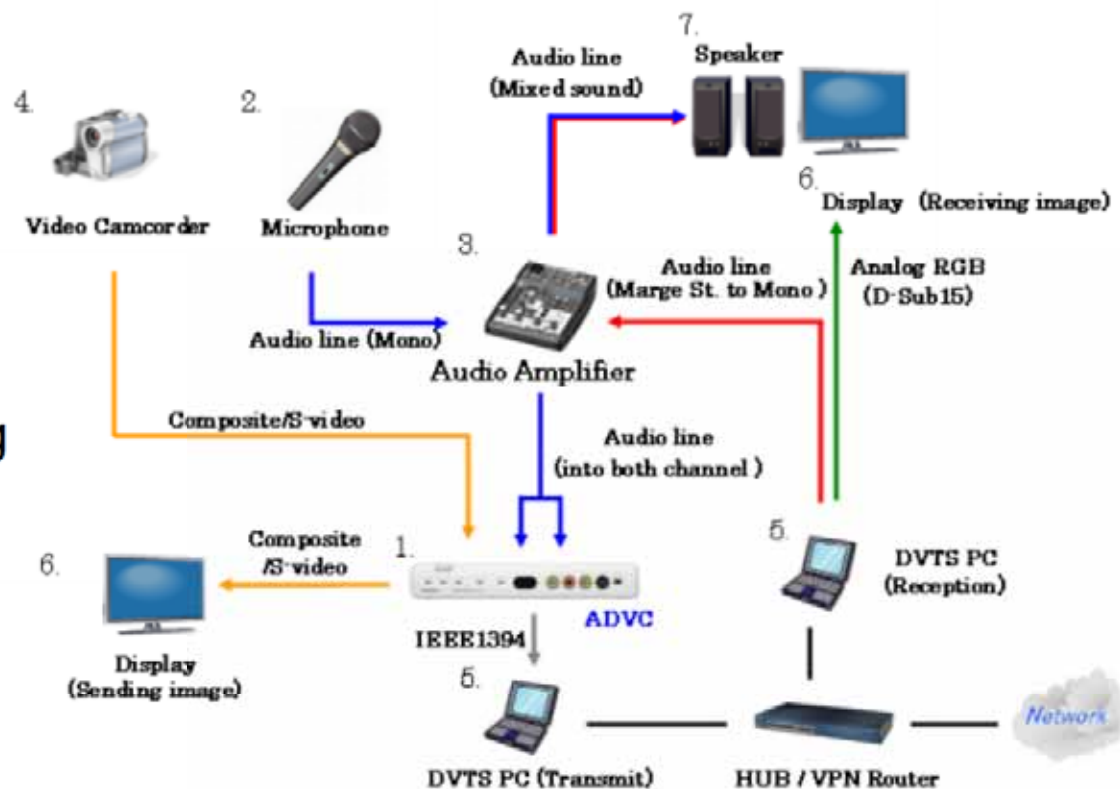
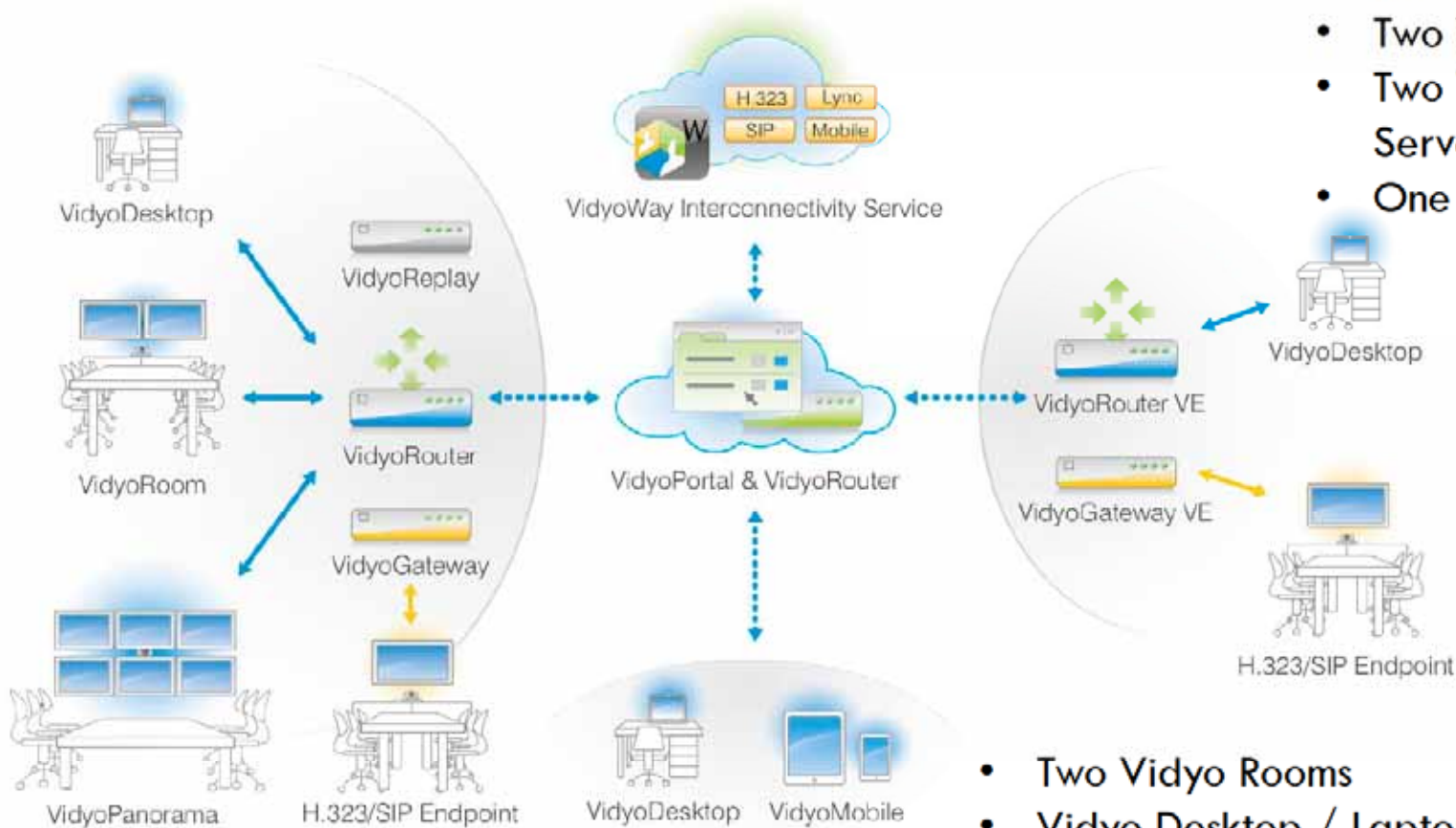


Fig. 2-1 Standard configuration

Contd..

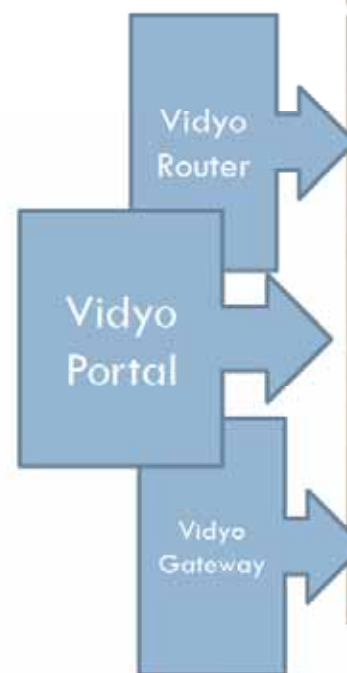


- Two Vidyo portals
- Two Vidyo Routers
- Two Vidyo Gateway Servers
- One Vidyo Recording

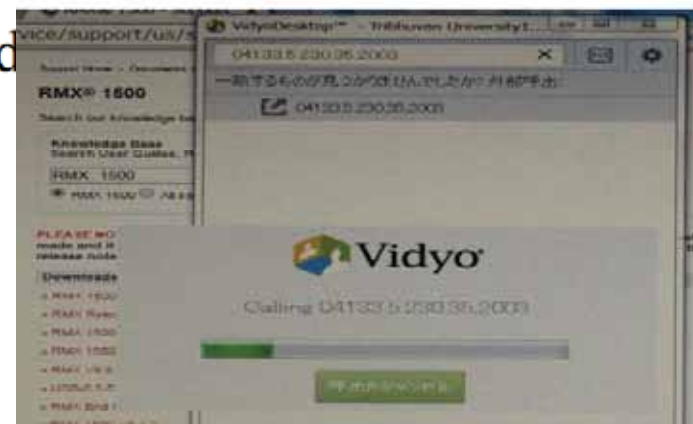
- Two Vidyo Rooms
- Vidyo Desktop / Laptops / Mobile

Contd..

- **Benefits of the Vidyo infrastructure**
- Easy, secure and simple service provisioning (for registered and non-registered guests)
- Support for any device: Android™, iOS™, Windows™, Mac™, Linux, Room and Telepresence systems
- 90% lower cost than legacy video conferencing MCUs
- No expensive reservation of dedicated hardware ports required
- No expensive QoS networks required
- No Global IP or Public IP required



Vidyo Portal

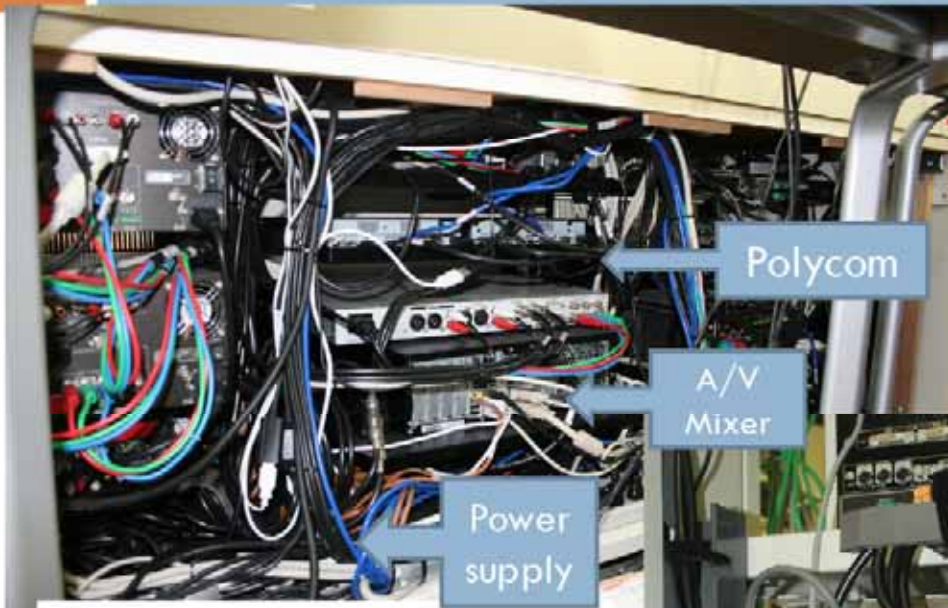


Training Program



Contd..

How devices are connected here



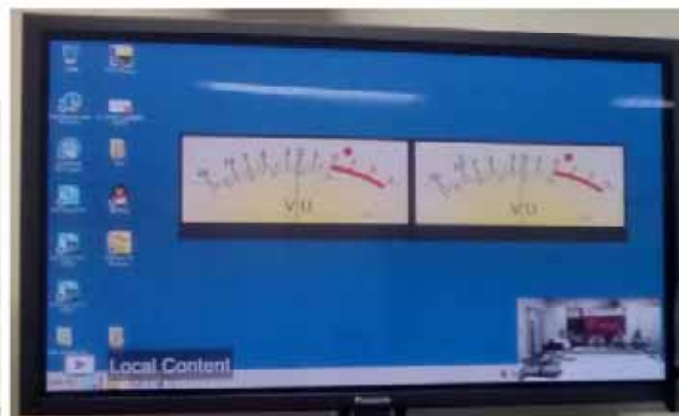
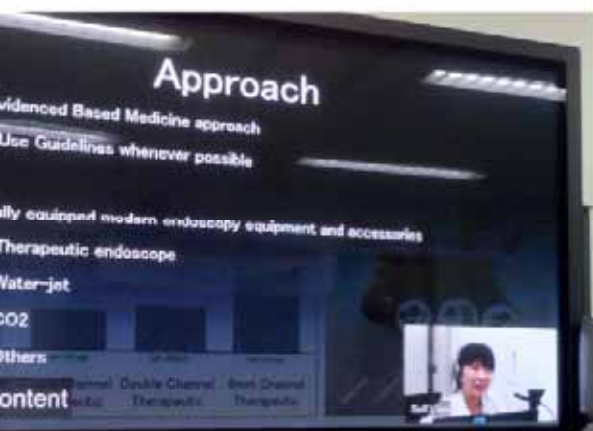
Backside view of devices



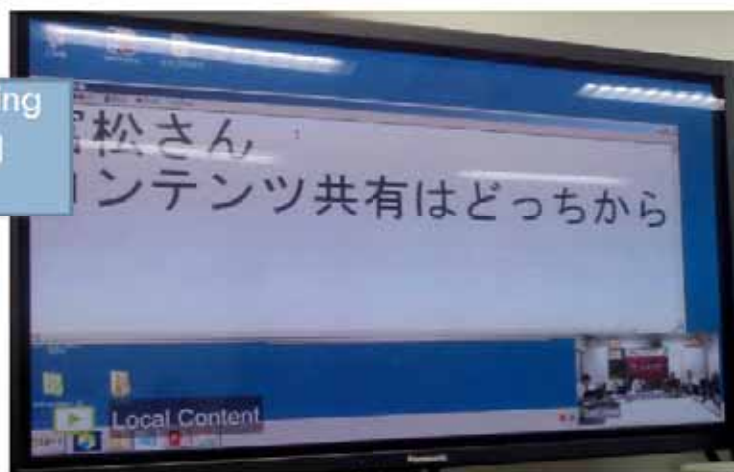
Shunta searching for some devices



Preparation for APAN40 session



↑
Ms. Yoshiko testing
for audio and
video



Living in Fukuoka, Japan

Friends from Indonesia, Thailand, Vietnam



Welcome Party at Daimaru Beer Garden Building



Firework at Ohori Park



Evening walk to Canal City



Daza

Living in Fukuoka, Japan Contd...



Searching for the right train station

You are lucky to have the information in English

中洲川端・天神・姪浜方面 For Nakasu-Kawabata/Tenjin/Meinohama

17:30 (K01) 姪浜 via train conn

17:39 (HO1/K09) 中洲川端 via Kawabata,

17:45 (K01) 姪浜 via train conn

2

のりば
Track



Google maps for the next train



Dazaifu



Fukuoka Tower

Places in Japan I visited

Beppu, Oita



Imari, Saga



Fumiko Yamamoto, MD
Head of Surgery

Food in Japan



Next in Future...

- We will have meeting by using Vidyo Desktop
- Sharing our experience in so many VC Situation and shooting out solutions for the better network and solutions.
- Helping IOM to increase VC with advanced teaching technologies and techniques using our own resources

ありがとうございます

arigatou gozaimas(u)

धन्यवाद



Thank You