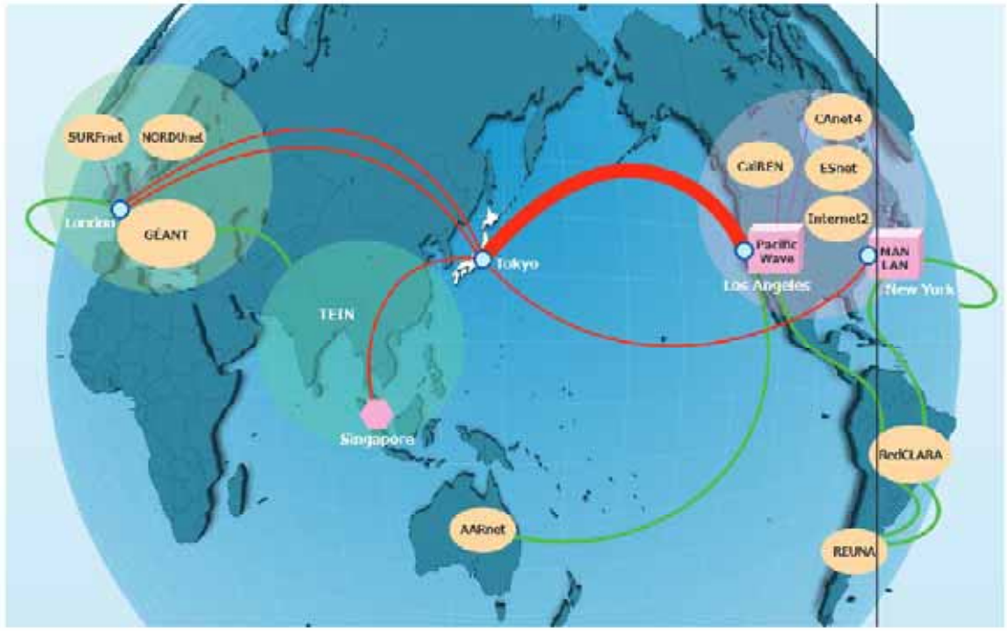


VISIT REPORT TO TEMDEC

Nancy Gertrudiz Salvador, Mexico

Objectives

- To understand organization telemedicine events (workflows)
- To identify requirements to support HD clinical videoconferences
- To get practice in technical preparations
- How to prevent technical problems in clinical videoconferences

Activities

1st week

- 22th, Test with China
  - Basic Vidyo Room HD 40
  - Tele-pointer (in house development)
  - Planning VC
- 23th, Welcome from Dr. Shimizu
  - Programming tests
  - Telemedicine Conference. An Guide Introductory Guide for Engineers
  - Planning VC
- 24th, network infrastructure discussion
  - Operating room visit
  - Planning VC
  - Review some reports
- 25th, Doctors meeting
  - Planning VC
  - Prepare presentation

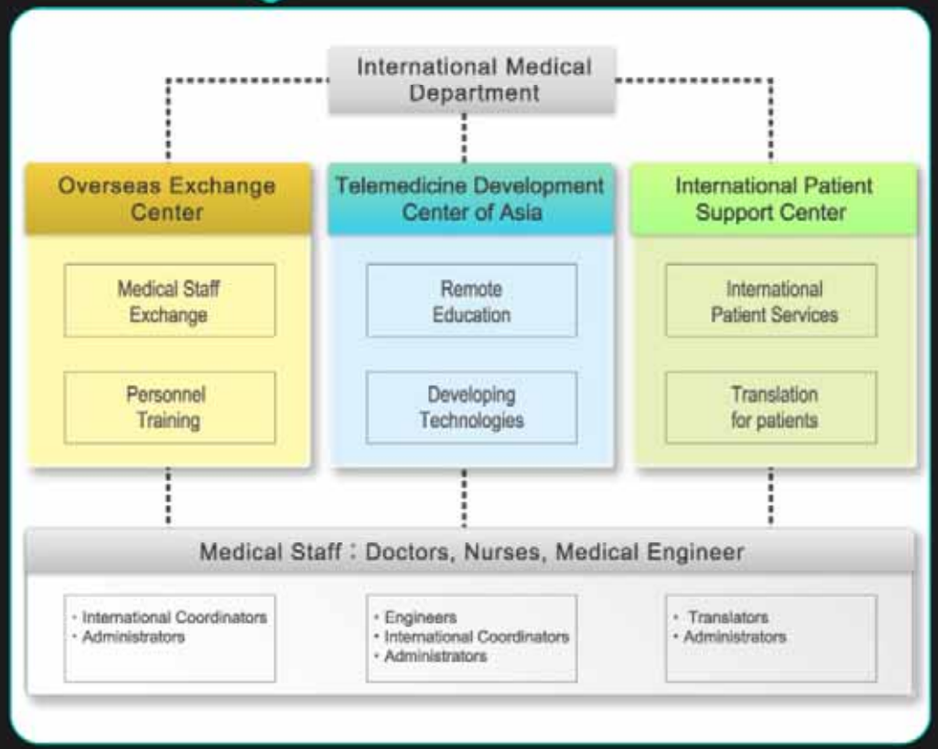
2nd week

- 28th, APAN Sessions
  - Prepare presentation
- 29th, APAN Sessions
  - Test with Mexico
  - VC with Chile
  - Test with Brazil
- 30th, APAN Sessions
  - Internet shutdown
- 1st Sept APAN Sessions
  - APAN Sessions
- 2nd Sept APAN Eng Session
  - Test with remote sites

3th week

- Prepare presentations, report
- Country reports

Organization

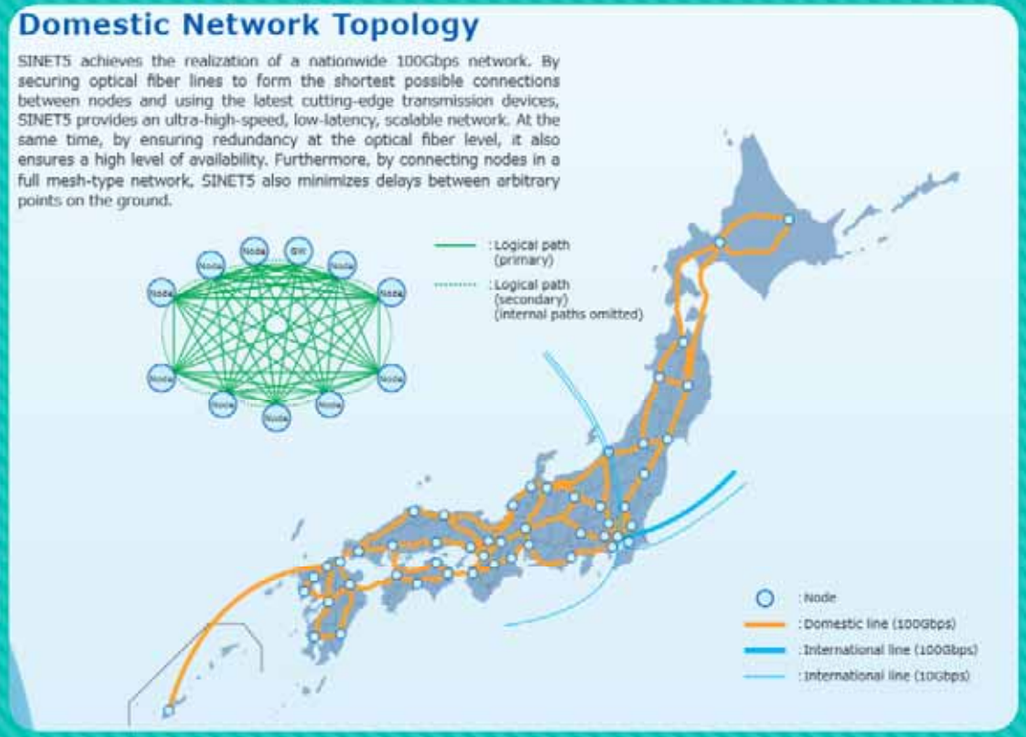


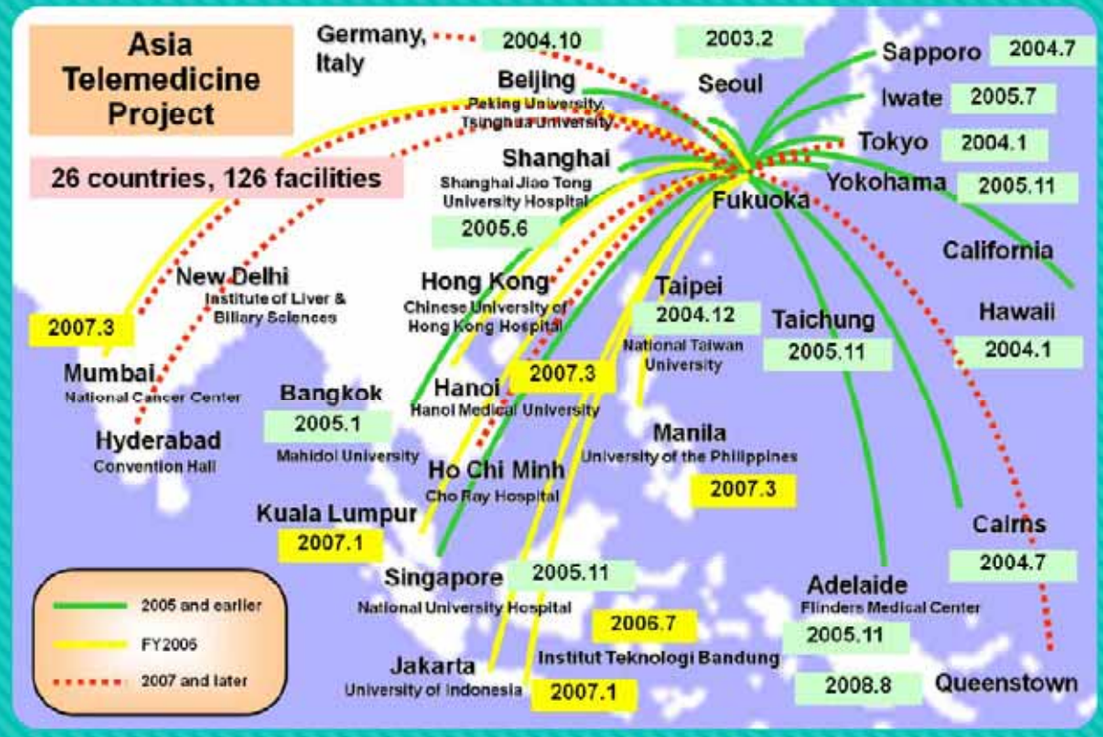
- Mission
  - To respond to all **medical needs** including disaster healthcare services
    - **Treatment, research and education**
    - **State of the art medical care practices**
- Objetives
  - Building a healthcare system that will **ensure quality of care and providing advanced research**
  - **Fostering research-minded doctors and promoting futher internationalization**
    - International Patient Support Center to admit foreign patients
    - Overseas Exchange center
    - Telemedicine development center of Asia
  - Pursuing the best medical and healthcare practices
    - **To satisfy patients and medical professionals**

Team model

To establish effective and consistent medical communications among Asian countries, **using super-fast Internet and advanced technology**.

Doctor (6-PhD)	**Engineer** (4)	**Coordinator** (2)	**Admin** (4)
• 2 professors • 4 doctors	• 2 PhD • 2 Engineers	• 2 professionals	• 4 professionals





TEMDEC Project

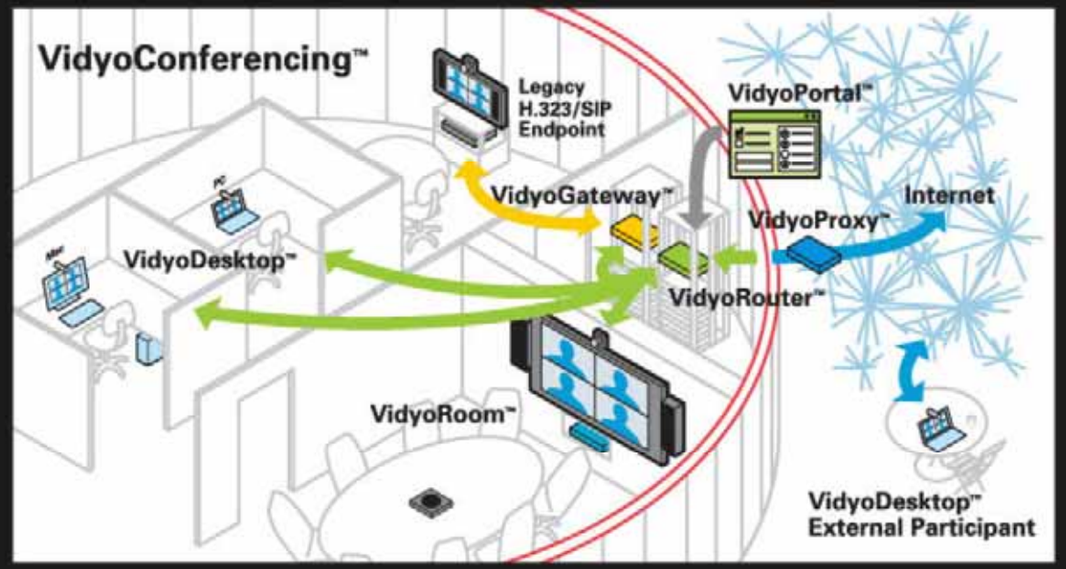
Workflow preparation phase

Verify requirements
- Equipment
- Install Vidyo

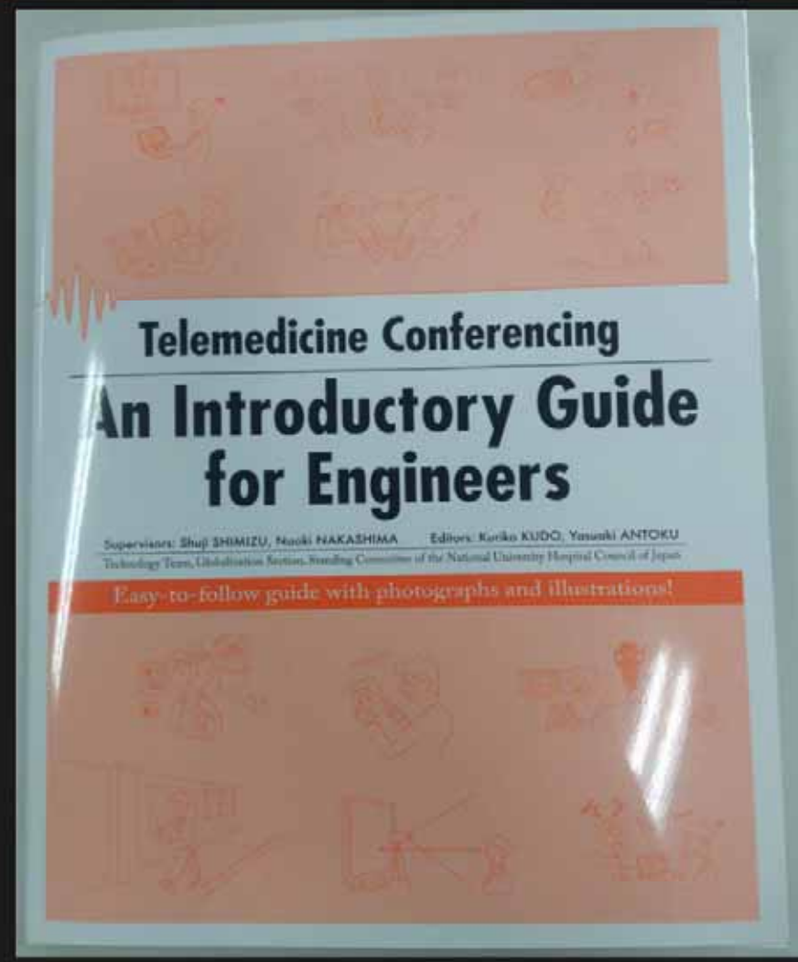
Preparation
- Webcam
- Speakerphone
- Network

Before call
- Test your computer and devices
- Test internet
- Connect with cable

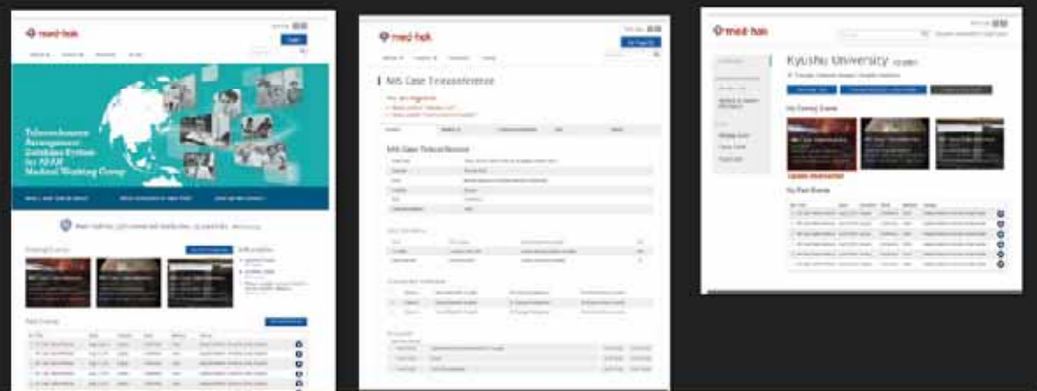
Access VC
- Access Vidyo portal
- Login Vidyo
- Join a room

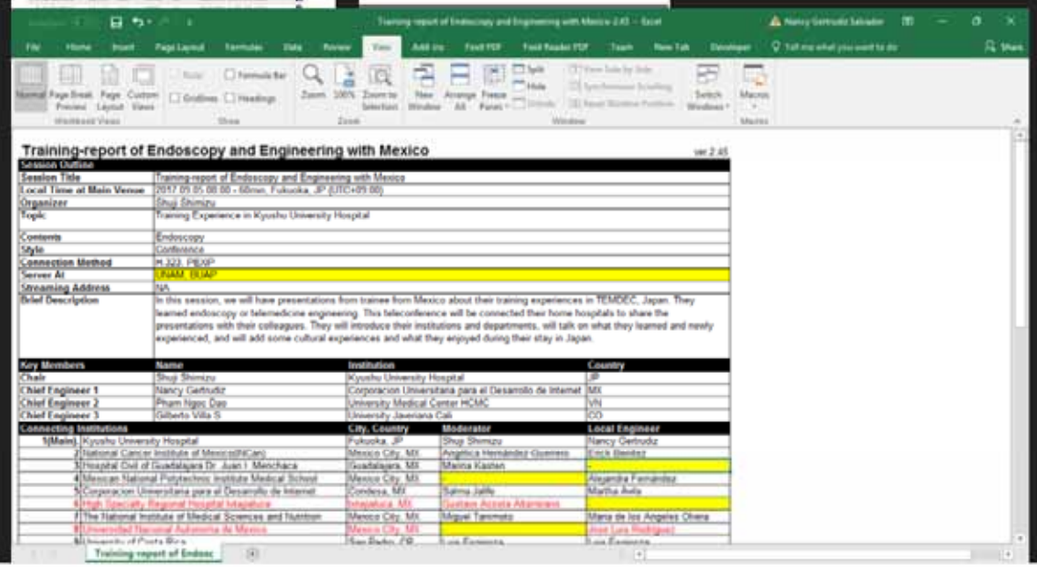


Systematic and Standard to manage complexity



Med-hok





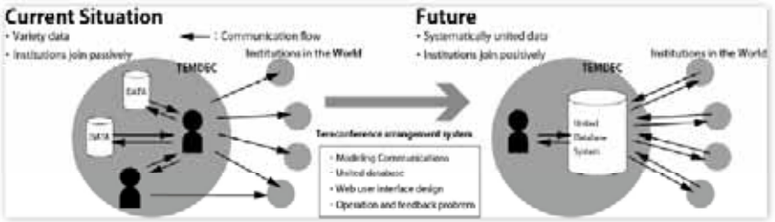
Training-report of Endoscopy and Engineering with Mexico

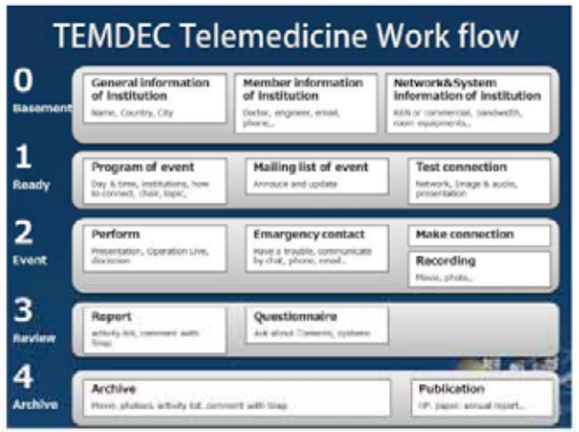
ver 2.45

Session Outline	
Session Title	Training-report of Endoscopy and Engineering with Mexico
Local Time at Main Venue	2017 05 05 08:00 - 60min, Fukuoka, JP (UTC+09:00)
Organizer	Shuji Shimizu
Topic	Training Experience in Kyushu University Hospital
Contents	Endoscopy
Style	Conference
Connection Method	H.323, PEXIP
Server At	UPAEM, EUAP
Streaming Address	NA
Brief Description	In this session, we will have presentations from trainee from Mexico about their training experiences in TEMDEC, Japan. They learned endoscopy or telemedicine engineering. This teleconference will be connected their home hospitals to share the presentations with their colleagues. They will introduce their institutions and departments, will talk on what they learned and newly experienced, and will add some cultural experiences and what they enjoyed during their stay in Japan.

Key Members	Name	Institution	Country
Chair	Shuji Shimizu	Kyushu University Hospital	JP
Chief Engineer 1	Nancy Gertrudiz	Corporacion Universitaria para el Desarrollo de Internet	MX
Chief Engineer 2	Pham Ngoc Dao	University Medical Center HCMC	VN
Chief Engineer 3	Gilberto Villa S	University Javeriana Cali	CO

Connecting Institutions		City, Country	Moderator	Local Engineer
1(Main)	Kyushu University Hospital	Fukuoka, JP	Shuji Shimizu	Nancy Gertrudiz
2	National Cancer Institute of Mexico(INCan)	Mexico City, MX	Angelica Hernández Guerrero	Yecia Bautista
3	Hospital Civil of Guadalajara Dr. Juan I. Menchaca	Guadalajara, MX	Marina Kasten	-
4	Mexican National Polytechnic Institute Medical School	Mexico City, MX		Alejandra Fernández
5	Corporacion Universitaria para el Desarrollo de Internet	Cordoba, MX	Salma Jalife	Martha Avila
6	High Specialty Regional Hospital Magdalena	Magdalena, MX	Gustavo Acosta Altamirano	
7	The National Institute of Medical Sciences and Nutrition	Mexico City, MX	Miguel Tanimoto	Maria de los Angeles Olvera
8	Universidad Nacional Autonoma de Mexico	Mexico City, MX		José Luis Rodriguez
9	University of Costa Rica	San Pedro, CR	Luis Fonseca	Luis Fonseca





Source: http://www.temdec.med.kyushu-u.ac.jp/medhok_min/about_02purpose.html

Physical spaces

- VC Room
- Stock room
- Telemedicine Centre Office

Telemedicine conference room

- **2** LCD Displays – Panasonic 80"
- **2** speakers – Panasonic RAMSA
- **3** reflectores light faces
- Tele-pointer server (in house development)
- DVTS Server (older)
- Polycom HDX **9000**
- Vidyo room HD **230**
- Lifesize CODEC
- **8** personal seat (microphone)
  - 3 conection seats
    - Power, network, DVI, RGB
- Control Console
- Sony PTZ Camera / remote control
- Media Servers
- Audio and video peripherial

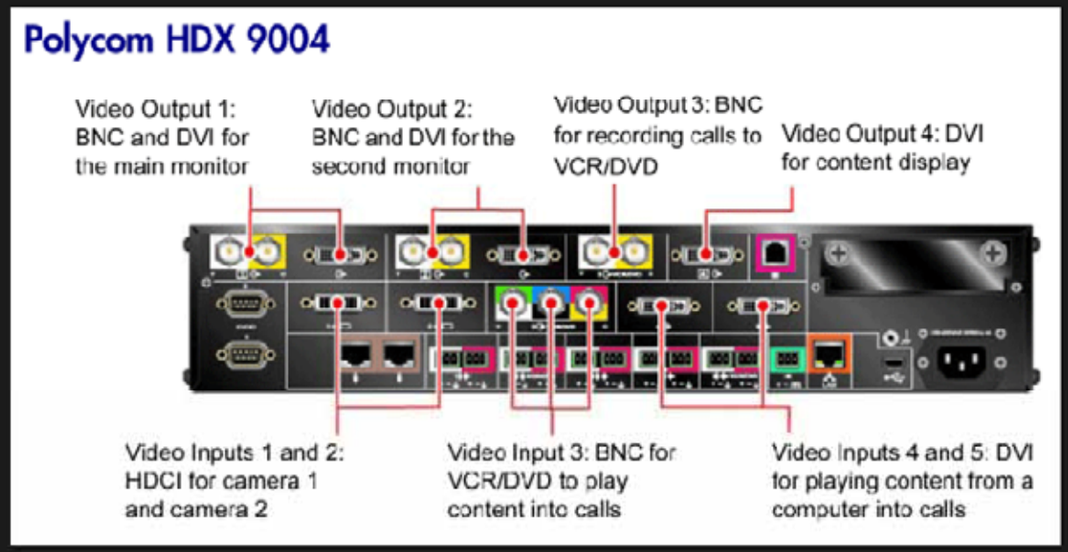
Infrastructure - Servers

- 2 Vidyo Portal
  - VPN
  - Public
- 2 Vidyo Gateway
  - 1 line
  - XF – Bigger (1-5)
- Vidyo Router
  - VPN
  - Public
- Vidyo replay
  - Streaming
- Media servers (Storage)
- Tele-pointer (in house development)
- Collaboration JoinView (Joint venture)
- Adobe Connect

VC models

Software oriented

Hardware – specific purpose



Minimum requirements (Vidyo Desktop)

Computer	Webcam	Network	Speaker phone

• OS
  • W10/8.X/7/XP
  • OS X 10.6
• CPU
  • Core 2 Duo 2 GHz
• RAM
  • 2 GB
	• Logicool **HD**
	  • C920, C910, BCC950,
	• iSight
		• No global IP address
		• Bandwidth
		  • Few Mbps
			• Build-in echo canceller
			• USB headset
			  • Phoenix Duet, Phoenix Quattro
			  • Plantronics headset series

Affordable

Hardware

Control

High Definition Cameras

Robotic Camera

PTZ

Web Cam

$$$$

Affordable - flexible

TEMDEC AS A TESTBED

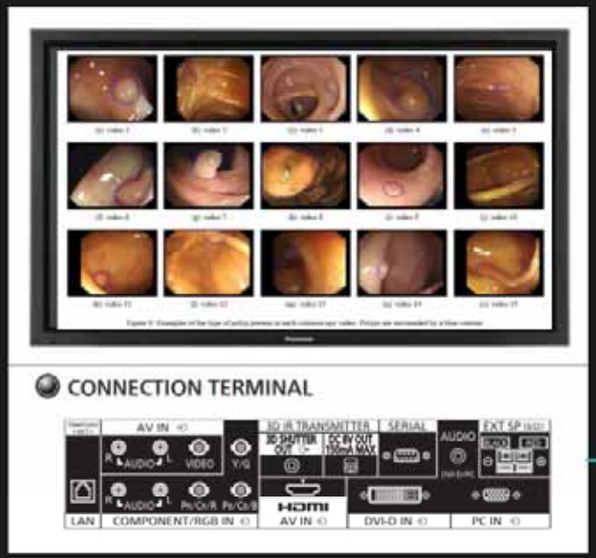
New tools and systems

Telepointer: In house development

Telepointer

Think global, act local

Vidyo Desktop
(China)



TH-65PF30U (HD 2007)

Vidyo Portal
(SINET Tokyo - APAN)

TH-65PF30U (HD 2007)

Content

Vidyo Room HD-230
(Kyushu University)

Recording and Storage Servers

Tele-pointer server

POLYCOM MCU

Vidyo Portal

Content

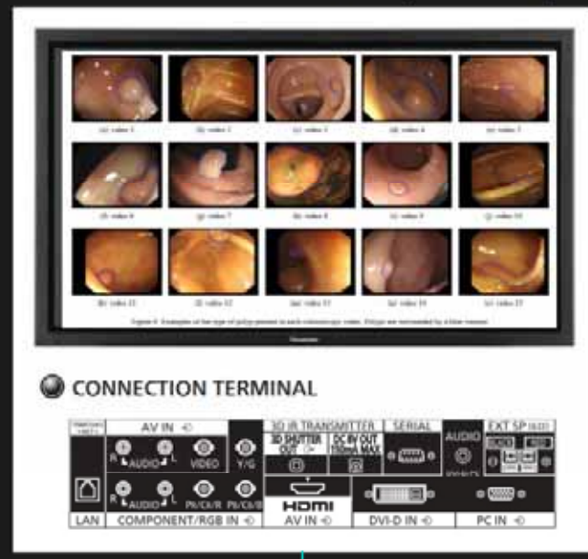
Professional audio system

Control Unit (Vydio, POLYCOM, DVTS)

Switch video content transmission (Tx)

Switch video content receiving (Rx)

TH-65PF20 (HD 2007)

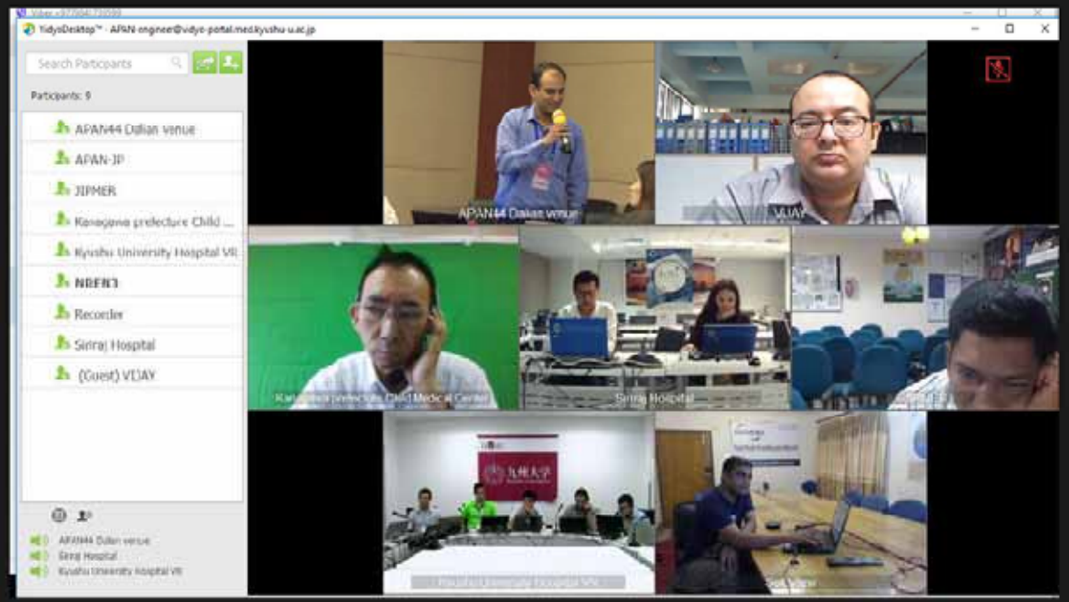


TH-65PF20 (HD 2007)

APAN

Specialist Sessions

Engineer Sessions



Operating Room

20 salas quirúrgicas

18 concurrent interventions

30 interventions daily – 9500 case/year

General surgery, gyn, otology, urology, orthopedic, cardiac, dental, pediatrics

Endoscopy surgery is ordinary practice

Robots

CUDI Overview

Corporación Universitaria para el Desarrollo de Internet http//www.cudi.mx.

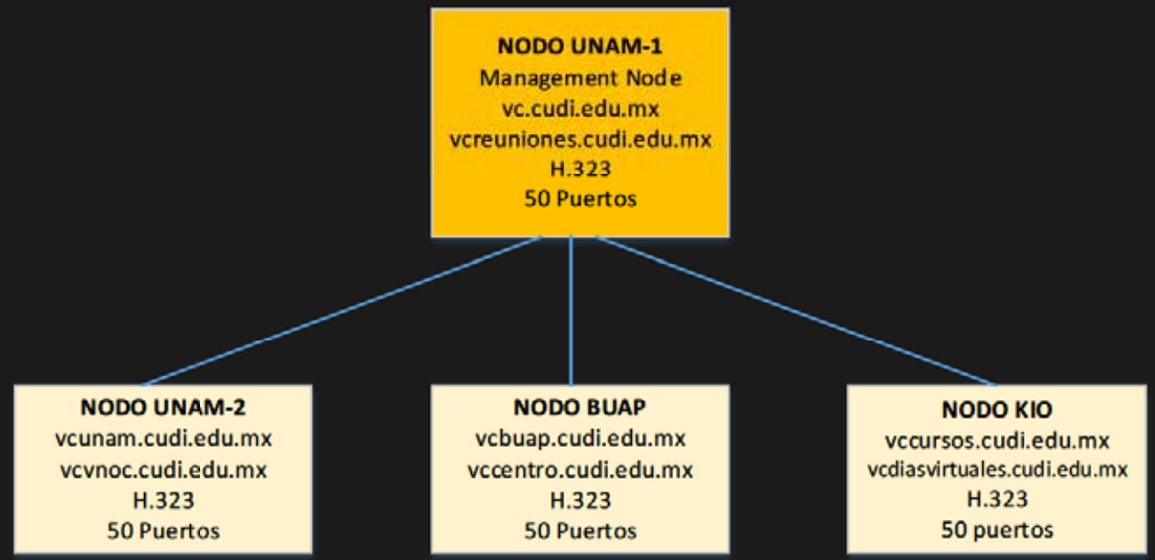
Funded 1999, technical responsible for National Education and Reserach Network in Mexico

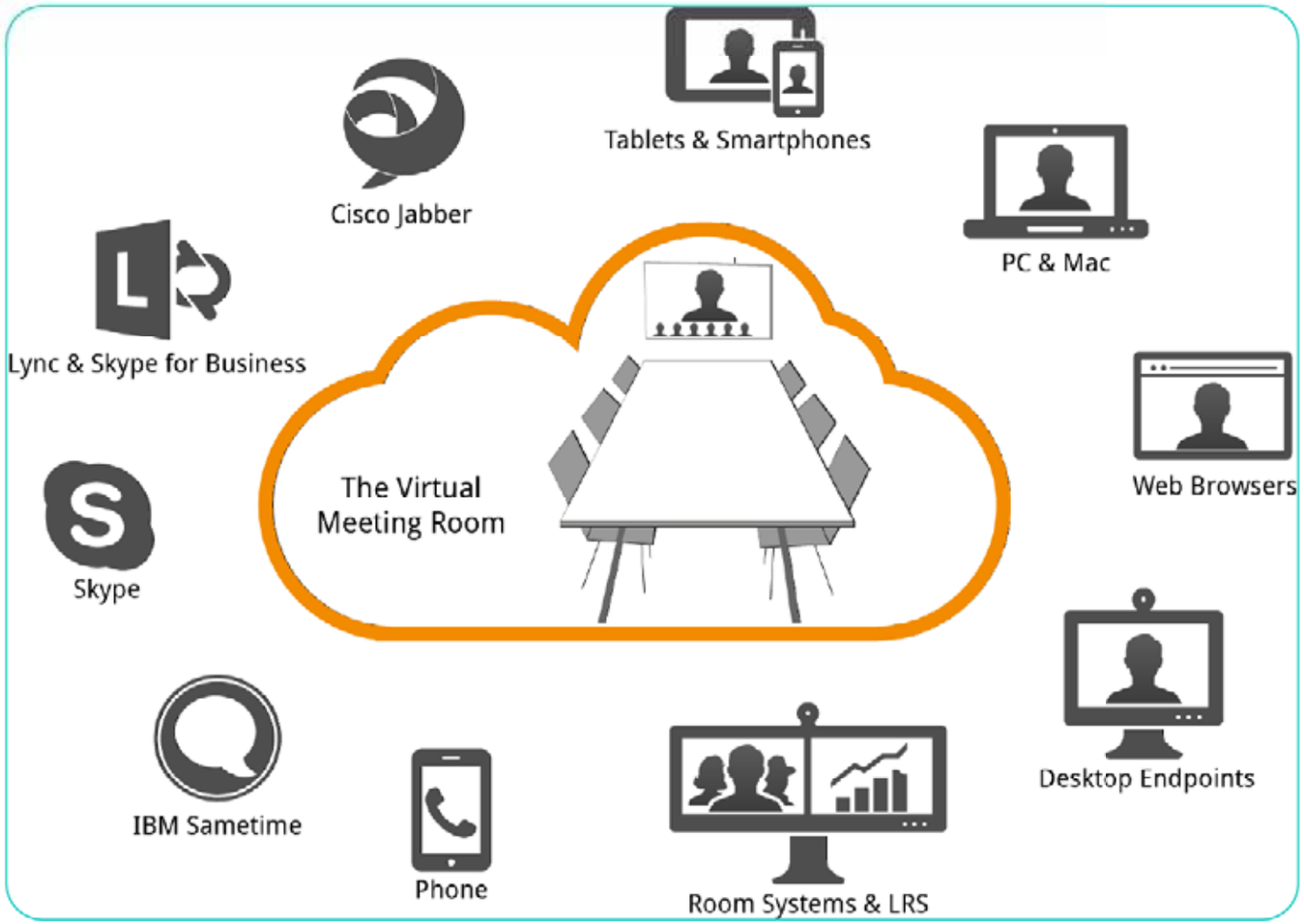
Obligation of the federal government to support the development of the NREN

550 education campus connected

Member of Latin CLARA Network

Brasil, Colombia, Mexico, Costa Rica, Chile (45%)



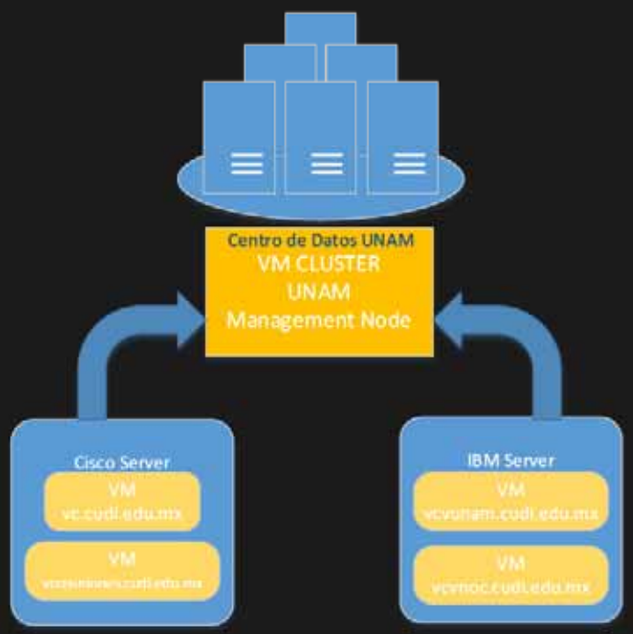


PEXIP

- Support MCU H.323
- Support End Point H.323, computers, tablets, smartphones
- Video and content transmission
- Server performance
- Server Performance (balanced CPU, RAM, Network and Hard Disk)

Data Centers supporting VC CUDI

UNAM



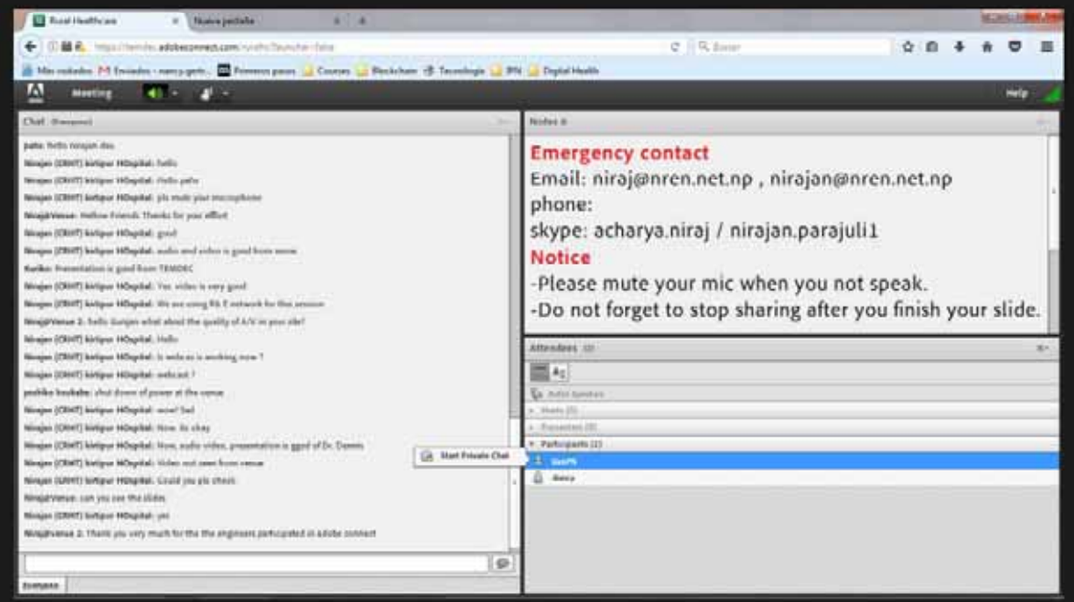
BUAP

Policies

- Informatics Kyushu University
- SW
- HW
- Office
- Dormitory
- Education, education, education

Next steps

- To programme visits and sessions to share experience with doctors and engineers from medical schools and hospitals
- To define a working plan with attendants
- To be prepared when there is not engineer
  - To write standard process
  - To select best practices from video recording
- To implemet knowledge support based on chat recordings in telemedicine sessions
- To continue to collaborate with TEMDEC



有難う 御座います
arigatou gozaimasu
Thank you

Muchas gracias
equipo TEMDEC