



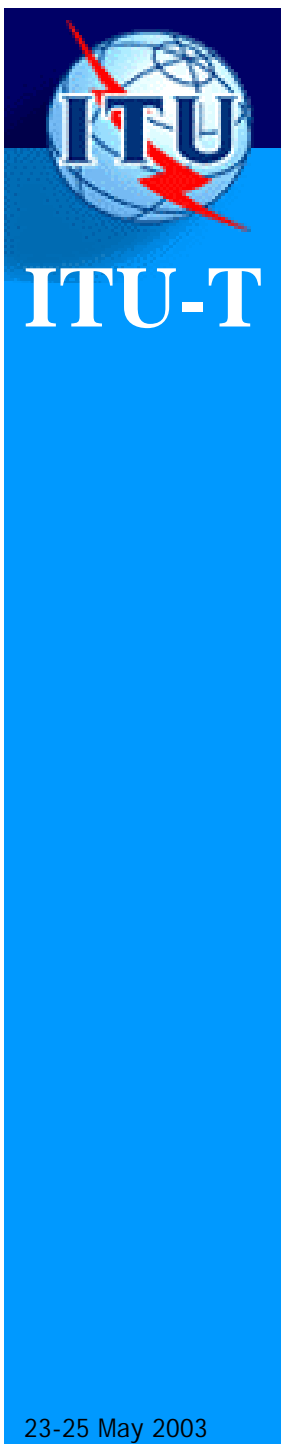
International Telecommunication Union

ITU Telemedicine Expert Training Course Hosted at Tokai University

**Agus Subekti, Futoshi Ohyama,
Hiroshi Juzoji, Isao Nakajima**

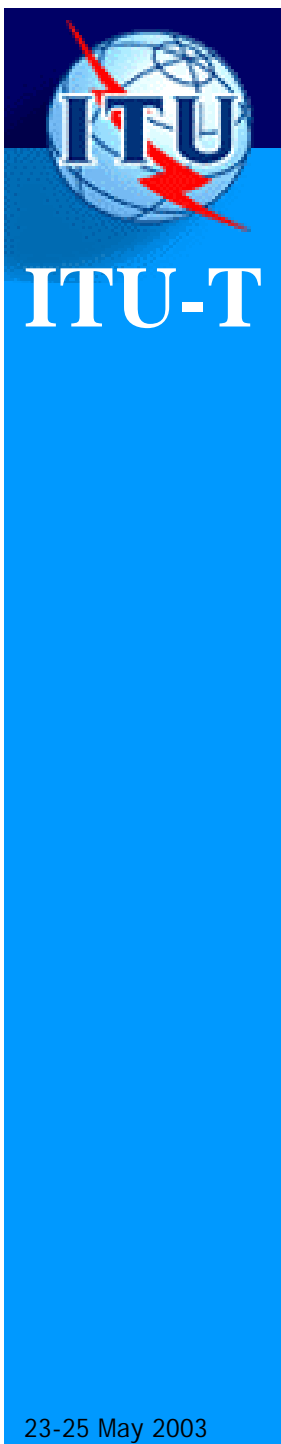
**Tokai University,
The Institute of Medical Sciences,
Shimokasuya 143, Isehara, Kanagawa,
259-1193 Japan**

**Workshop on Standardization in E-health
Geneva, 23-25 May 2003**



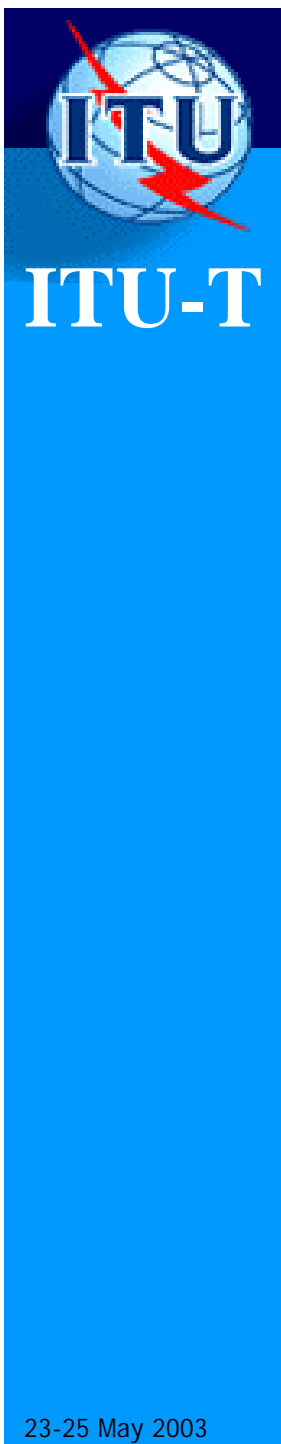
Summary

- With the rapid advance on telemedicine, professionals from developing countries usually do not have chance to follow due to limited resource in their countries. There is a need of training to face this problem.
- This paper presents on activities of the e-health expert training course hosted at Nakajima Laboratory The Institute of Medical Sciences Tokai University JAPAN. The program was offered to medical and health care workers from developing countries.
- The objective of this program is to give an understanding of current trend and technologies in telemedicine and provide the foundation for the preparing of telemedicine services.



Background

- o In accordance to the Buenos Aires Action Plan in 1994, the Telecommunication Development Bureau (BDT) of ITU has undertaken 10 activities to improve telecommunication infrastructures in developing countries. Among these activities the telemedicine project is one of the most favorite activities that many developing countries are interested and eager to participate.
- o Though few countries had any experience on telemedicine in 1994, the ITU/BDT SG-2 Question 14/2 led by its Rapporteur, Professor Leonid Androuchko, implemented and studied a number of telemedicine pilot projects in developing countries. As a result, the awareness and interest on telemedicine has been growing tremendously among the ITU members. There are now over 100 developing countries having already conducted some kinds of telemedicine projects.



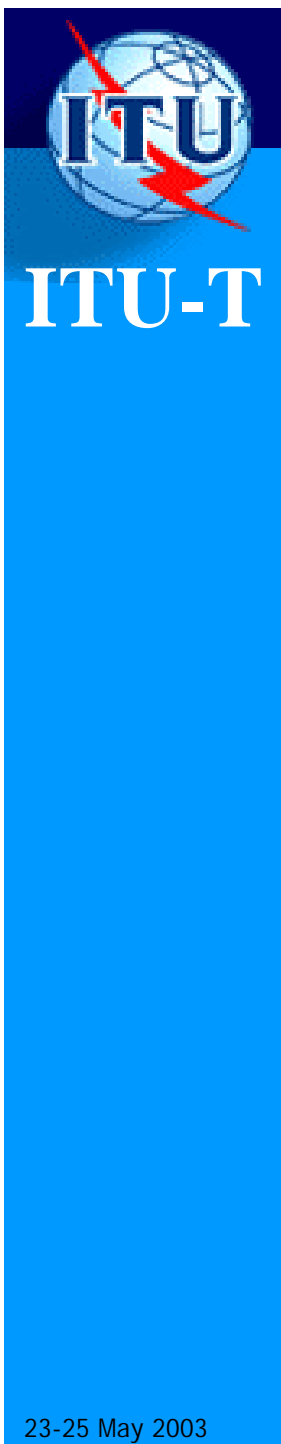
Background (cont.)

- o However, despite the recent improvement in hardware and the removal of regulatory barriers, telemedicine is facing with major difficulties in developing countries. Lack of expertise and training opportunities on telemedicine has become one of the major obstacles for the deployment of telemedicine in developing countries. Professor Androuchko, the Rapporteur of ITU/BDT SG-2, has requested developed countries to offer training courses on telemedicine, but no ITU members responded because of the cost problem.
- o In the end, at the meeting of ITU/BDT SG-2 in Caracas, Venezuela (September 2001) the Co-Rapporteur of Telemedicine, Dr. Isao Nakajima (Assistant Professor of Tokai University Institute of Medical Sciences) proposed an E-health Expert Training Course hosted by Tokai University Institute of Medical Sciences. This proposal was adopted unanimously. It is the first attempt in the world to offer the specialized training course on telemedicine and e-health for healthcare workers from developing countries. It has already attracted attention not only in Japan but also from a number of other countries.



Program Outlines

- o ITU Telemedicine Expert Training Course is hosted at Tokai University. Tokai University invites selected participants from developing countries to study and provide all facilities, instructors, and accommodations.
- o On the completion of this program, participants will have knowledge in current trends of telemedicine as well as research and application methodology in telemedicine



Program Outlines (Cont.)

Activities in the course can be summarized into four parts:

- a. Dissemination of telemedicine research and implementation, especially involvement of Nakajima Laboratory in telemedicine project
- b. To get insight about the advance of telemedicine equipment
- c. To enrich research possibilities related to telemedicine
- d. To enhance the administrative and management capability in telemedicine services.

Opening Ceremony

Professor Kiyoshi Kurokawa, the Director of Tokai University Institute of Medical Sciences announced the opening of ITU Telemedicine Expert Training Course at Shonan Campus located in Hiratsuka, Kanagawa just 60 kilometers away from Tokyo on February 7, 2002.

Mr. Katsuhiko Sato (Director of International Organization Office, International Affairs Department, Telecommunications Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications), Mr. Masato Shinagawa (President of the ITU Association of Japan Inc.), Mr. Marcel Duret (Ambassador of the Republic of Haiti) expressed the special congratulations and thanks to this special event.





Signing Ceremony MoU Between ITU and Tokai University

On November 14, 2002, MoU regarding this course was signed between Mr. Yoshio Utsumi (Secretary General of ITU) and Prof. Kiyoshi Kurokawa (Director of Tokai University Institute of Medical Sciences) at Tokyo, Japan.



Participants



Mr. Yongguo Zhao
China
2000- 2002
Research on Medical Images



Mr. Hendri Priyadi
Indonesia
Aug. 2001-Mar. 2002
Research on Voice recognition



Mr. Agus Subekti
Indonesia
From Aug. 2001
Research on Satellite Visibility



Mr. Asep Najmurokhman
Indonesia
Jun.-Dec. 2002
Research on Wireless Router



Mr. Gregory Domond
Haiti
Jun.-Nov. 2002
Research on Wireless Router


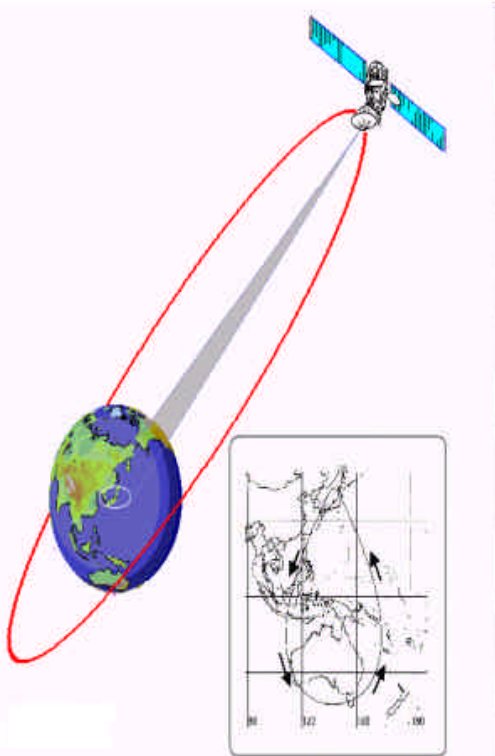


Mr. Kinlay Penjor
Bhutan
July.-Dec. 2002
Research on Tele-ECG



Research Activities

Research Activities (1)
HEO tracking system on ambulance



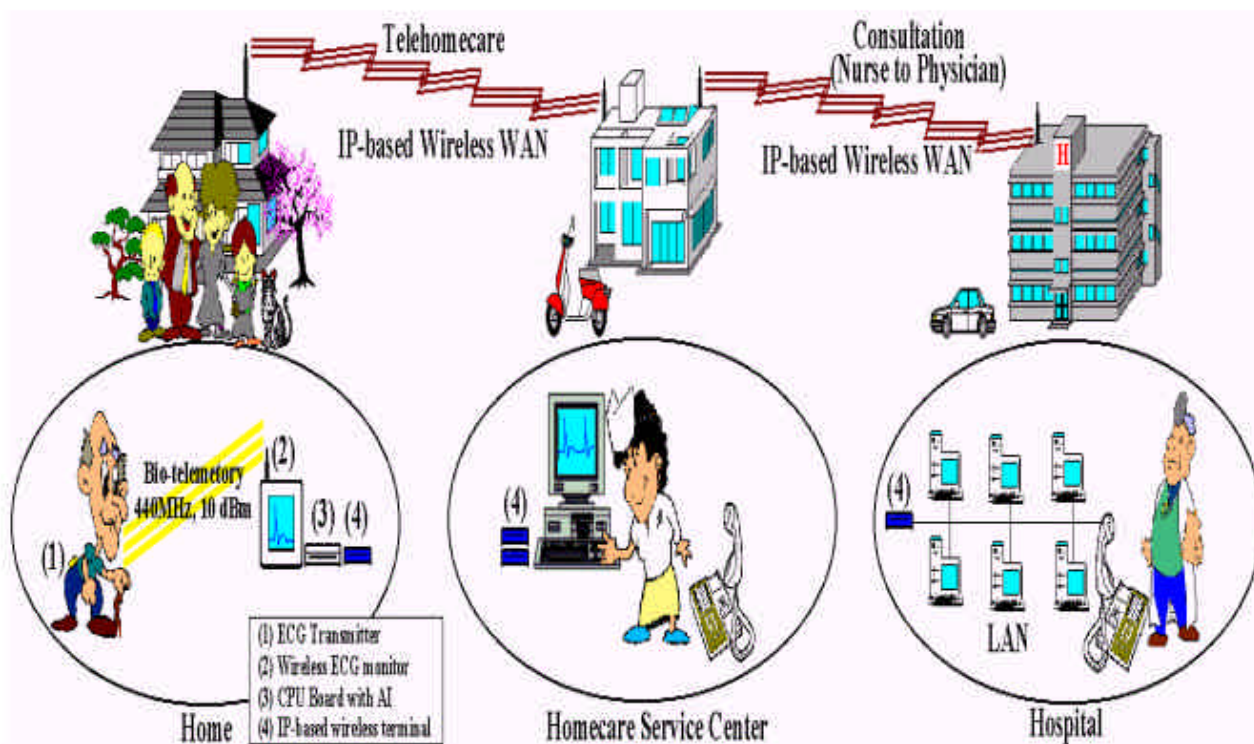
The diagram on the left illustrates the HEO tracking system. It shows a satellite in a high Earth orbit (HEO) with a red elliptical path around the Earth. A grey beam of light represents the signal path from the satellite to a ground station. An inset map shows the satellite's ground track over the region of East Asia. The photograph on the right shows a white ambulance with two white dome-shaped antennas on its roof. A yellow arrow points to the left antenna, labeled 'Two antenna diversity (Communication satellite)'. A blue arrow points to the right antenna, labeled 'GSP antenna'. The ambulance has Japanese text on its side: '東野大学総合医学研究所'.



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Research Activities (2)

IP-ECG for TELEHOMECARE





Concluding remarks

- Activities of the e-health expert training course hosted at Tokai University have been briefly presented. The Course has given the benefit for attendants who came from developing countries. They have gained an understanding of telemedicine system from knowledge-wise until its current and future trend.

Thank You