
BP-7: Digital images and moving image technologies in Medicine, present state, problems and future

Katsuya Yahata (Institute of Industrial Ecological Sciences University of Occupational and Environmental Health)

Foreword

This is a special report of seven panel discussions sponsored by Communications Society in 2008 IEICE General Conference held in Kitakyusyu-shi, Japan in this March.

Hot topics related to advanced communication technologies were extensively discussed by the experts together with the participants to explore not only the future of communications technologies but also the deployment of new systems and services.

1. Introduction

In this 30 years medical images developed with information technologies. And the advance of technology changed medical diagnosis and therapy dramatically.

In this seminar, we introduced and discussed about medical imaging technologies and their future.

2. Program

1. Digital image and movie technologies in Medicine, present state, problems and future

Katsuya Yahata, University of Occupational and Environmental Health, Japan

2. Medical imaging technologies in telemedicine, problems and future.

Norihiko Tateishi, Nagasaki prefectural University

3. Present state of moving image of cardia

Masaki Tamura, National disaster medical center

4. Future of ubiquitous medicine by BAN(Body area network)

Shinsuke Hara, Osaka City University

5. Image transmission, digitizing and processes in medicine

Atsushi Kioke, KDDI R&D Laboratories

3. Presentation

BP-7-1 Digital image and movie technologies in Medicine, present state, problems and future, **Katsuya Yahata**

In this program, Dr.Yahata introduced all speakers and present state of medical imaging technology.

-History of medical imaging and computer

-Ultrasonic echo

-Electronic endoscope

-Computed tomography

-Magnetic resonance imaging

-Computed radiography

-FPD (flat panel detector)

-PET (positron emission tomography)

-3D volumerendering

-Digital angiography

-PACS (Picture archiving and communication system)

-DIOCM (Digital Imaging and COmmunication in Medicine)

-Radiotherapy

BP-7-2 Medical imaging technologies in telemedicine, problems and future, **Norihiko Tateishi**

Prof. Tateishi presented about telemedicine for island and remote areas, using moving images. He said 'Telemedicine is mandatory clause for remote areas which is poor in medical infrastructure.' And also he said 'its needs to political change to popularize telemedicine'.

BP-7-3 Present state of moving image of cardia, **Masaki Tamura**

Mr. Tamura presented most-advanced moving images technologies in cardiovascular organs. Using MDCT (Multi detector-row CT) can make cardiac image within 1 sec. then we could see cardia in statics and check small arteries

BP-7-4 Future of ubiquitous medicine by BAN (Body area network), **Shinsuke Hara**

Mr. Hara introduced BAN and usability in future. It doesn't need electrical connection and automatically has an information relationship.

BP-7-5 Image transmission, digitizing and processes in medicine, **Atsushi Kioke**

Mr. Koike explain medical information relationship using mobile phone. In Nagoya (the 3rd big city in Japan), they tested using there system. In the system members of doctor send medical image safety and have medical consultation in cerebrovascular disease. And he introduced capsule endoscopy and its image data transport.

4. Discussion

Participants asked some questions, especially about BAN and telemedicine.

BAN has highly possibilities. Although, there many social problems, privacy, security, or another.

Telemedicine is now narrow using in clinical medicine in Japan. Perhaps telemedicine will be popular in time.

Organizer of the Panel



**BP-7: Associate Prof. Katsuya
YAHATA**

Institute of Industrial Ecological
Sciences University of Occupational
and Environmental Health