

写真-5      メモリアル大学 テレライター (ホワイトボード)

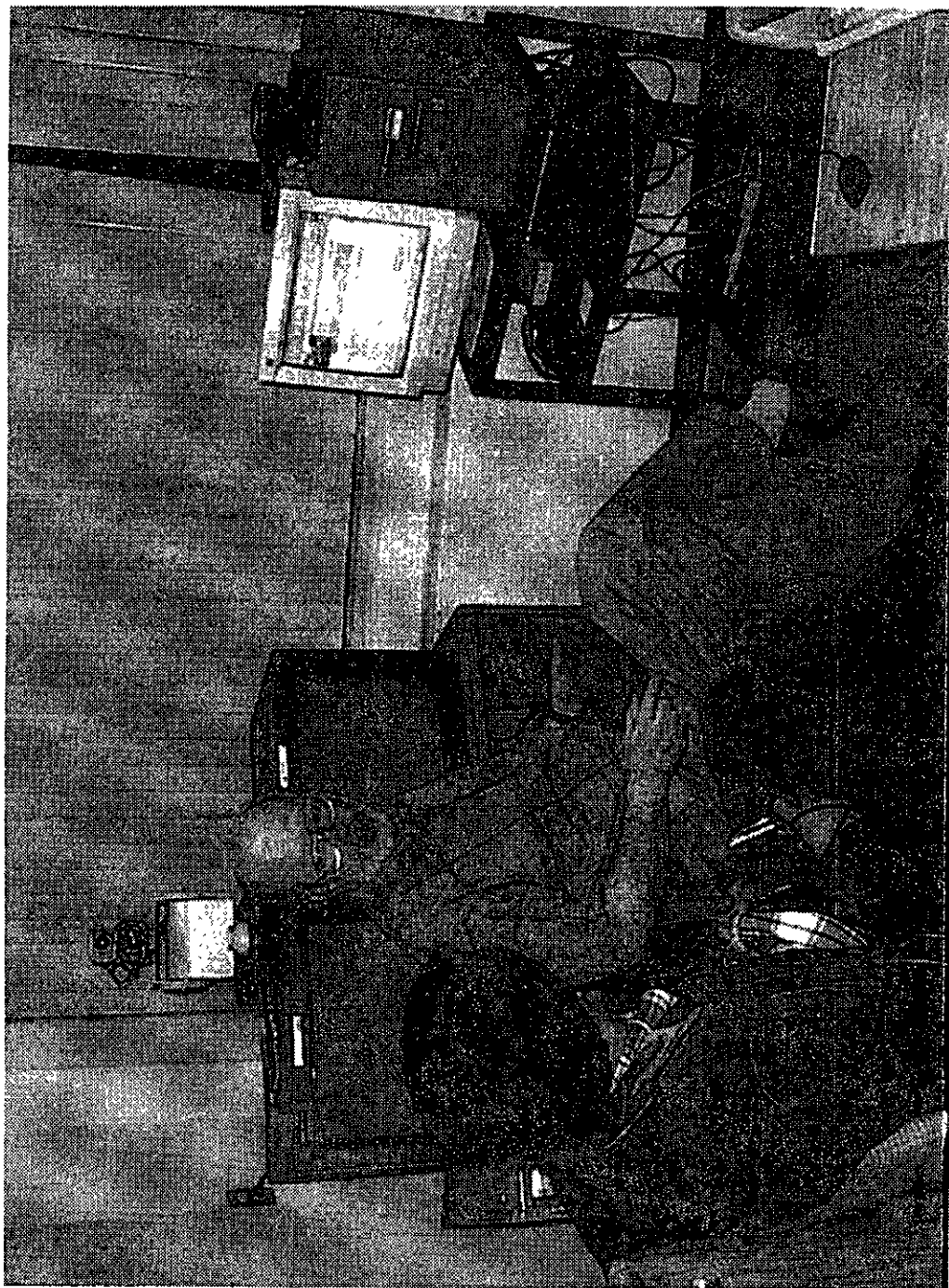


写真-6 メモリアル大学 Intel TeamStation

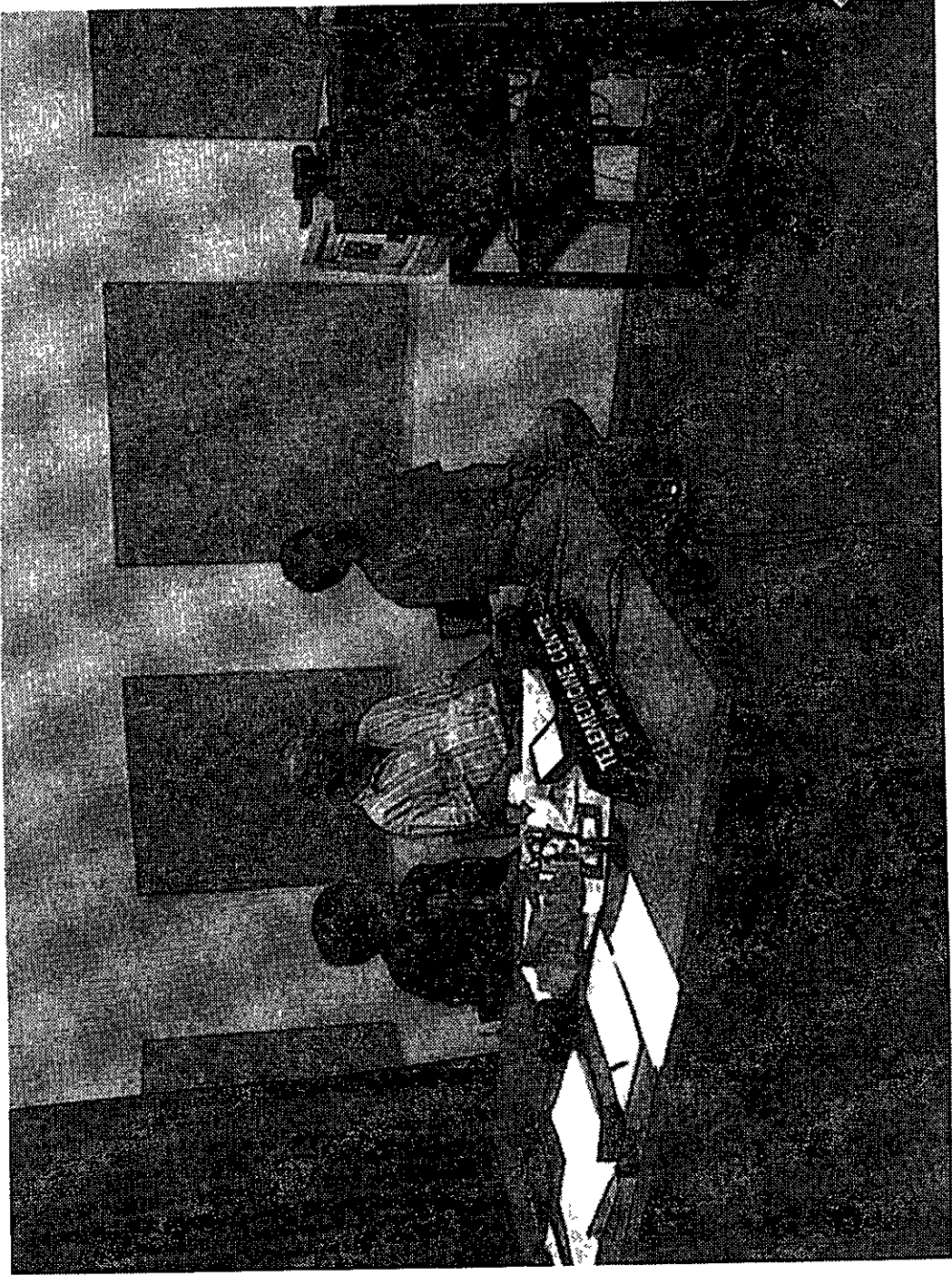


写真-7      メモリアル大学 セミナー室



写真-8 モントリオール大学病院 遠隔医療室 (I)



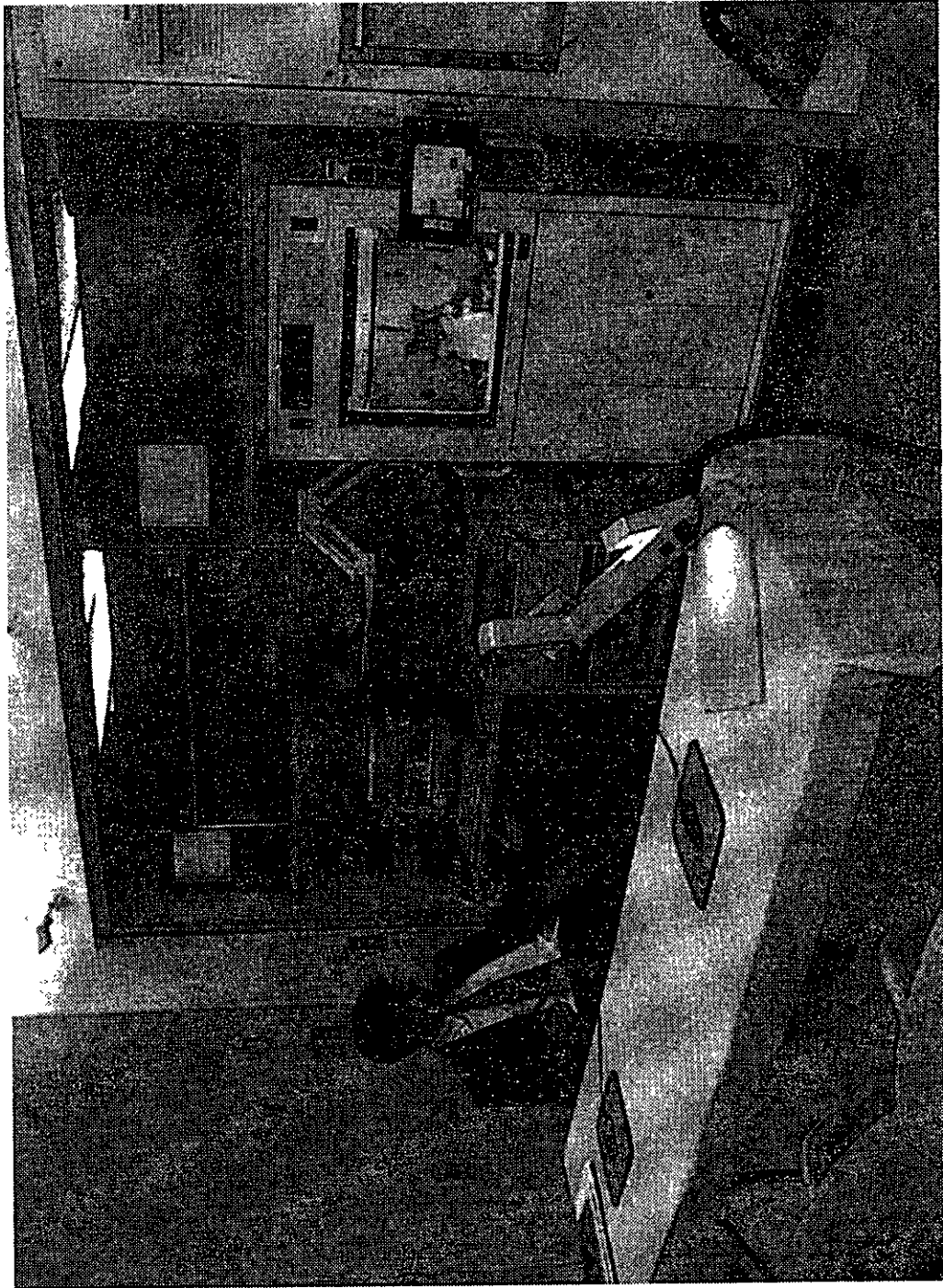


写真-9 モントリオール大学病院 遠隔医療室(2)

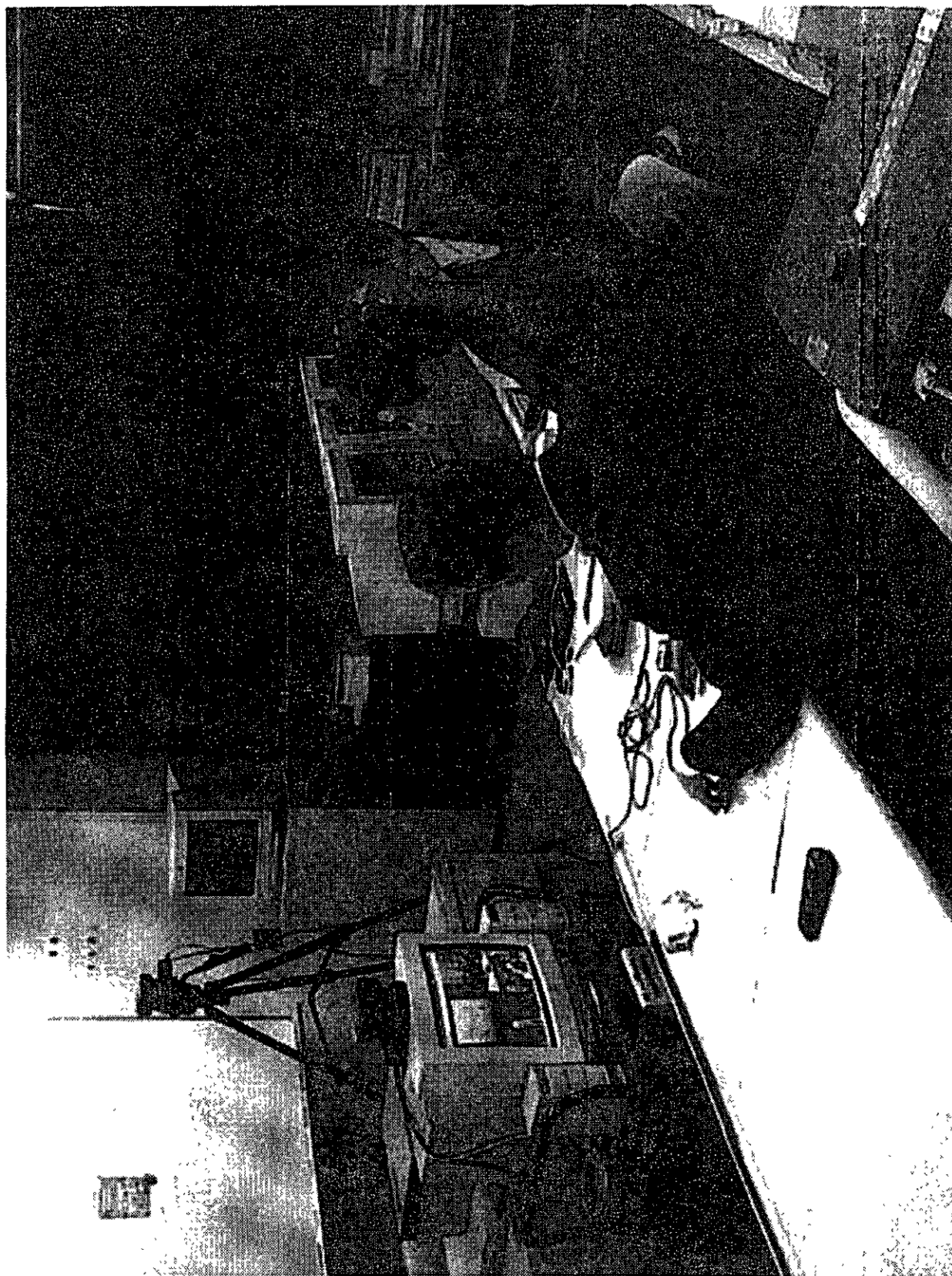


写真-10 第一回 黒川教授 岡田助手 青木講師

モントリオール



写真-11

東海大学

セント・ジョーンズ

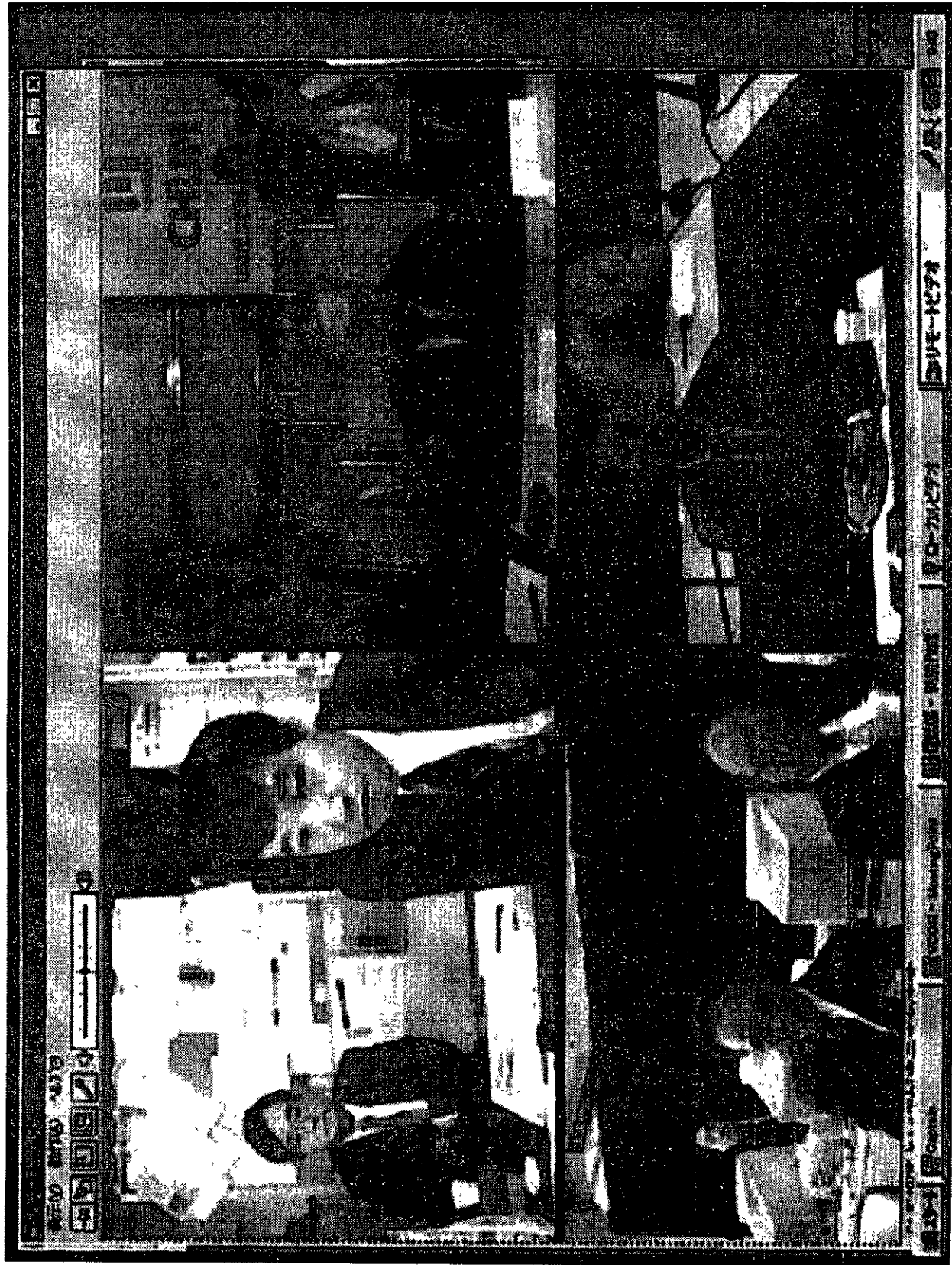


写真-12 第二回 東海大学伊勢原校舎 メモリアル大学



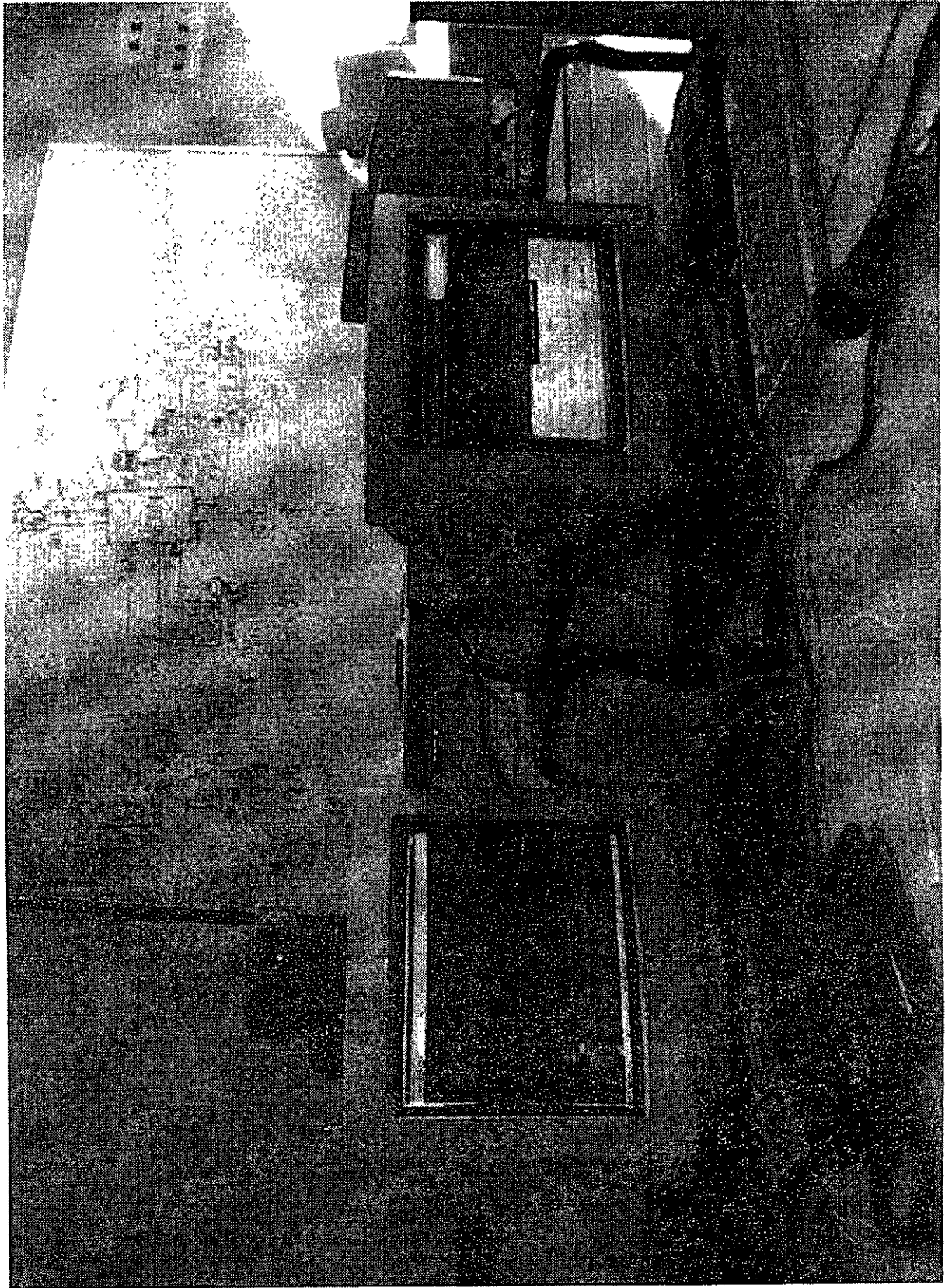


写真-13 テレビ会議システム プレゼンテーション用パソコン

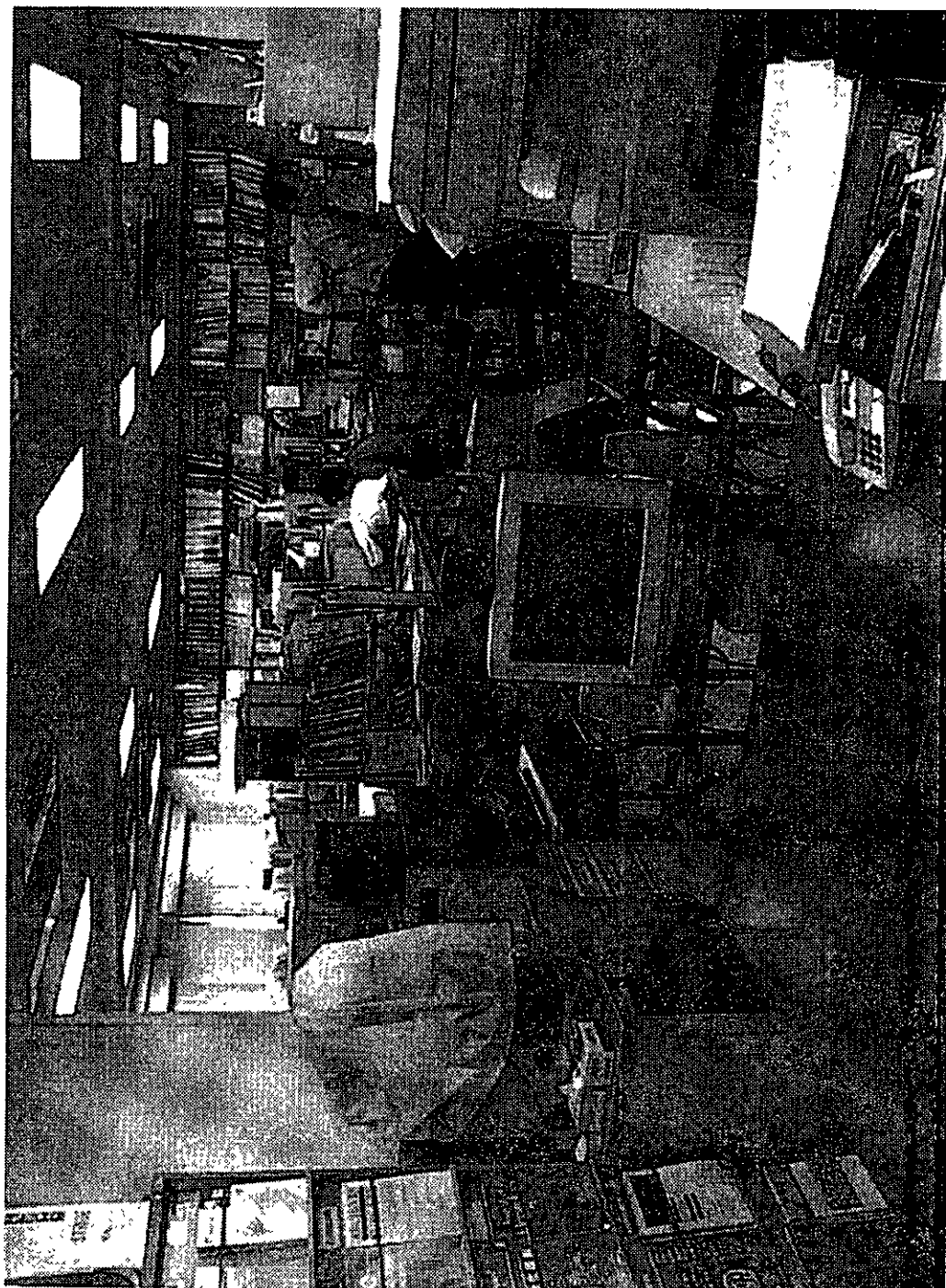


写真-14 東海大学医学部付属東京病院 医局の端末

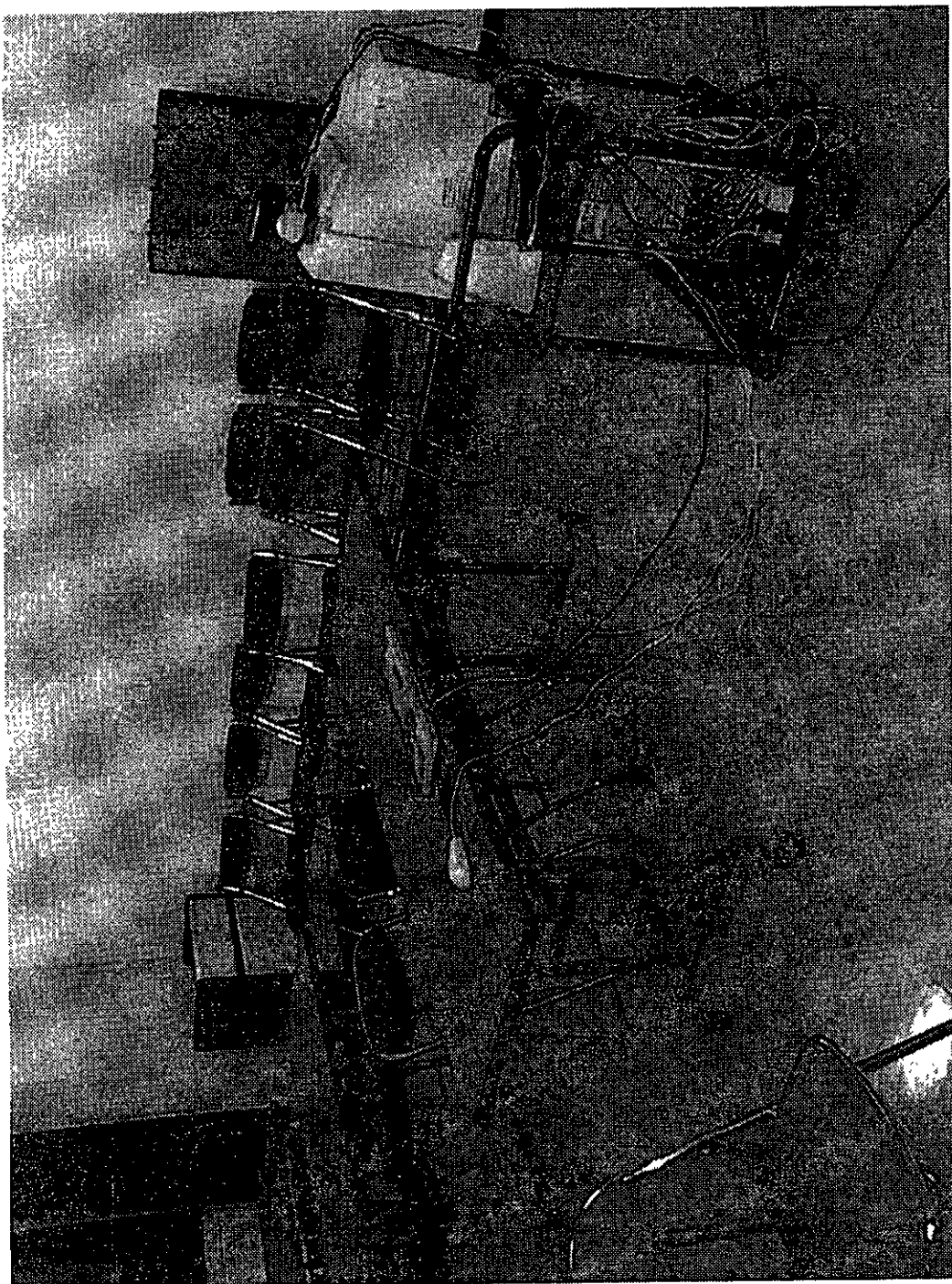


写真-15 東海大学医学部付属大磯病院 会議室の端末

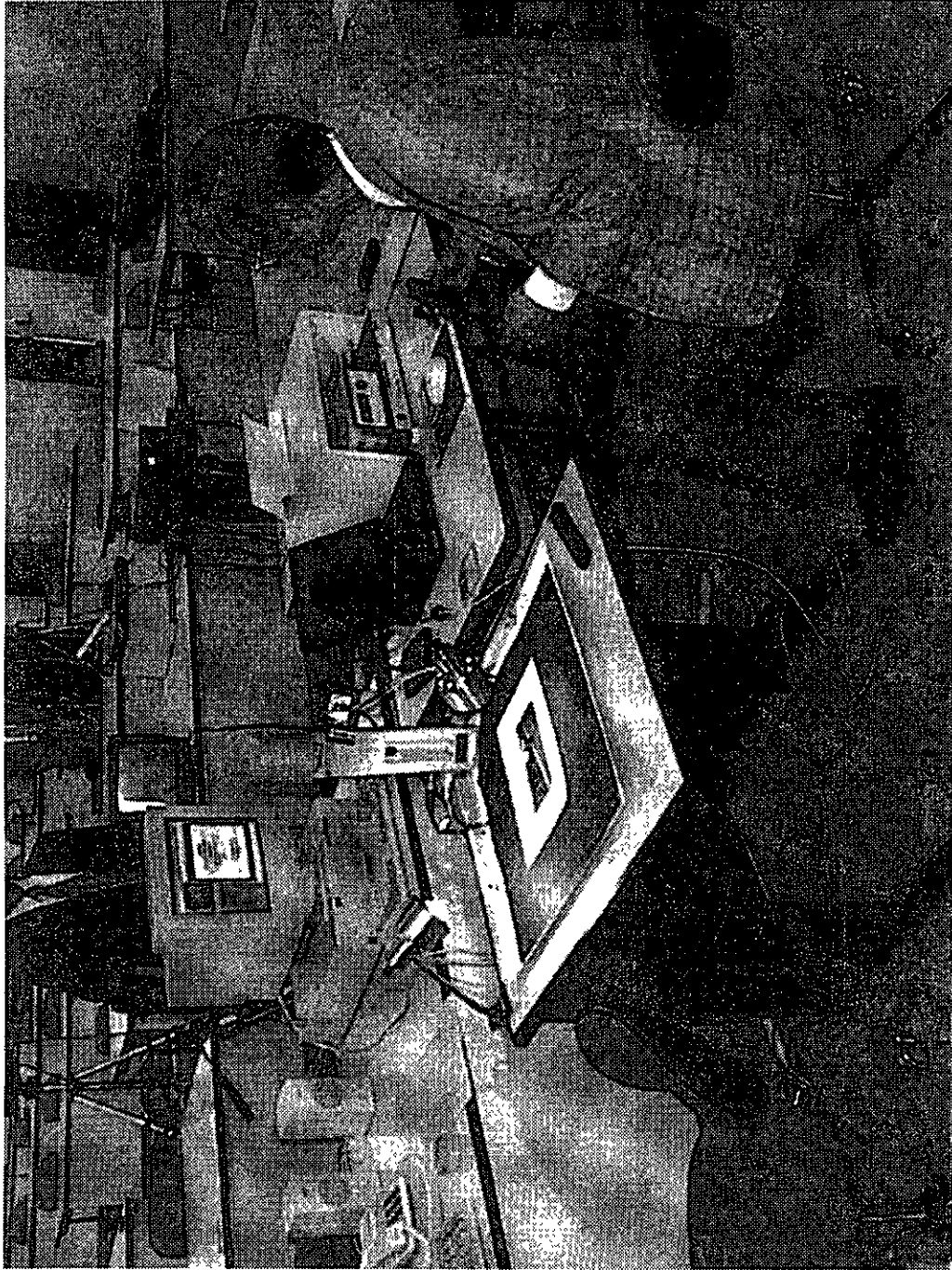


写真-16 文科大学からの講義発信



# 資料集

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## Sector Competitiveness Frameworks Series Telehealth Industry

### Key Points about this Industry

<a href="#">Foreword</a>	<a href="#">Highlights</a>	<a href="#">Key Points about this Industry</a>	<a href="#">Changing Conditions and Industry Response</a>	<a href="#">Growth Prospects</a>	<a href="#">Annexes</a>
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## Introduction

On this page: [Introduction](#) [One Definition, Many Applications](#)  
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[Canadian Industry Snapshot](#)

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There are many definitions of telemedicine. The one used in the guideline for companies registering in this field in Industry Canada's Canadian Company Capabilities (CCC) database is: "all forms of remote medicine: teleconsultations, telepathology, teleradiology, telepsychiatry, teledermatology, telecardiology and so on."

However, there are few definitions to aptly define *telehealth*, an integrating and more holistic term encompassing all of the telematics applications in health and health care. In Europe, the field is referred to as *health care telematics*. The definition of *telehealth* as "the use of communications and information technology to deliver health and health care services and information over large and small distances" reflects the changing nature of the twin fields of health and medical information on the one hand, and telemedicine on the other hand. Historically, these two fields operated separately but now are merging, not only because the technology is making it possible but also because current applications are making it necessary.

The telehealth industry encompasses practices, products and services bringing medical care and health information to remote locations. It extends the arm of the health care system for people at home and provides health services direct to consumers. It offers continuing medical and health education, and assists consumers in obtaining emergency assistance wherever they may be. Moreover, it incorporates health

informatics and telematic applications, using communications technologies in association with monitoring and medical devices, emergency systems, health, medical and computer systems to transform and transfer medical and health content and deliver health care services, education and assistance at a distance. As defined, it embraces a wide range of traditional telemedicine practices with newer activities and applications combining medical and health informatics with telematics systems and applications.

## One Definition, Many Applications

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Increased use of telecommunications technology in health reflects a trend occurring in virtually every industry. Therefore, the telehealth industry shares characteristics with other sectors of Canada's growing knowledge-based economy. The principal asset of knowledge-based industries is, as would be expected, knowledge — both as input and output — which comes to be seen as a key source of innovation, technological development, long-term growth and job creation. Telehealth systems exchange or distribute content based on the pharmaceutical, medical, educational, health and social service industries. These industries have all been classified as knowledge-intensive in comparison with many other mature or traditional manufacturing and service industries. Telehealth is also technology-intensive, another characteristic of knowledge-based industries, as it involves computers and information technology, networks, multimedia, and (in more experimental applications) artificial intelligence, robotics and virtual reality.

For this Overview, telehealth applications are grouped into five categories, each with its own set of users, from health care professionals and administrators to patients and consumers (Table 1).

**Table 1. Telehealth Categories and Users**

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<b>Category</b>	<b>Users</b>
All forms of medicine-at-a-distance: teleconsultations, telepathology, teleradiology, telepsychiatry, teledermatology, telecardiology, etc.	Physicians Health care professionals Health care institutions
Interinstitutional, patient and clinical records and information systems, electronic health and clinical records and databases accessible by network	Health care institutions Health care professionals Health care workers Physician's offices Researchers
Public Health and Community Health Information Networks (CHINs) and multiple-use health information networks	Government (including policy makers) Epidemiologists Public health professionals Physician's offices Pharmacies Clinics and CHINs
Tele-education and multimedia applications for health professionals and patients, and networked research databases; Internet services	Universities and colleges Associations Researchers Physicians Health care professionals Patients
Telemonitoring, telecare networks, telephone triage, remote home care, and emergency networks	Consumers Elderly Chronically ill Disaster victims Accident victims Telenurses Call centre users or operators

Telehealth permits the transfer of different kinds of health data and information related to:

- provision or confirmation of a diagnosis
- surveillance and epidemiology
- health care management
- clinical practices
- research
- literature search and retrieval
- health and wellness
- health and medical educational content.

The technologies and systems used for telehealth vary greatly from one application to another, but each application — even the simplest — contains at least three

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components:

- a device or a means to capture, process and store content (input), whether sound only, electronic or digital images, tracings, alpha-numeric data or a combination
- content and a means to transfer or exchange the content (throughput), including communications, telecommunications or network technologies of all kinds and their associated software
- a means for receiving, storing and displaying the content (output), including a video monitor, a computer file server or a recorder of some kind.

Current telehealth practices across the board are notable for their adoption among a variety of organizations from both the public and the private sector. Participation may be direct, indirect or financial. Organizational stakeholders include government; private sector; universities, colleges and research institutions; hospitals; institutes and associations; foreign organizations; other health care facilities; and patients and consumers.

## Global Context

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### General

[General](#) [Technology](#) [Remote Care and Telemedicine](#)  
 Global Context: [Interinstitutional Networks and Community Health Information Networks](#)  
[Population Health Networks](#) [Tele-education for Health Professionals and Patients](#)

Rapidly rising costs of health care and how to control them have become the most important health policy issue in developed countries in the past two decades (Table 2).

**Table 2. Health Expenditures of the G-7 Countries**

(As a percentage of gross domestic product)

<b>1975</b>	8.4	7.2	7.0	8.1	6.1	5.6	5.5
<b>1980</b>	9.3	7.3	7.6	8.4	6.9	6.6	5.6
<b>1985</b>	10.8	8.4	8.5	8.7	7.0	6.6	5.9
<b>1990</b>	12.7	9.1	8.9	8.3	8.1	6.8	6.0
<b>1994</b>	14.3	9.7	--	--	--	--	--

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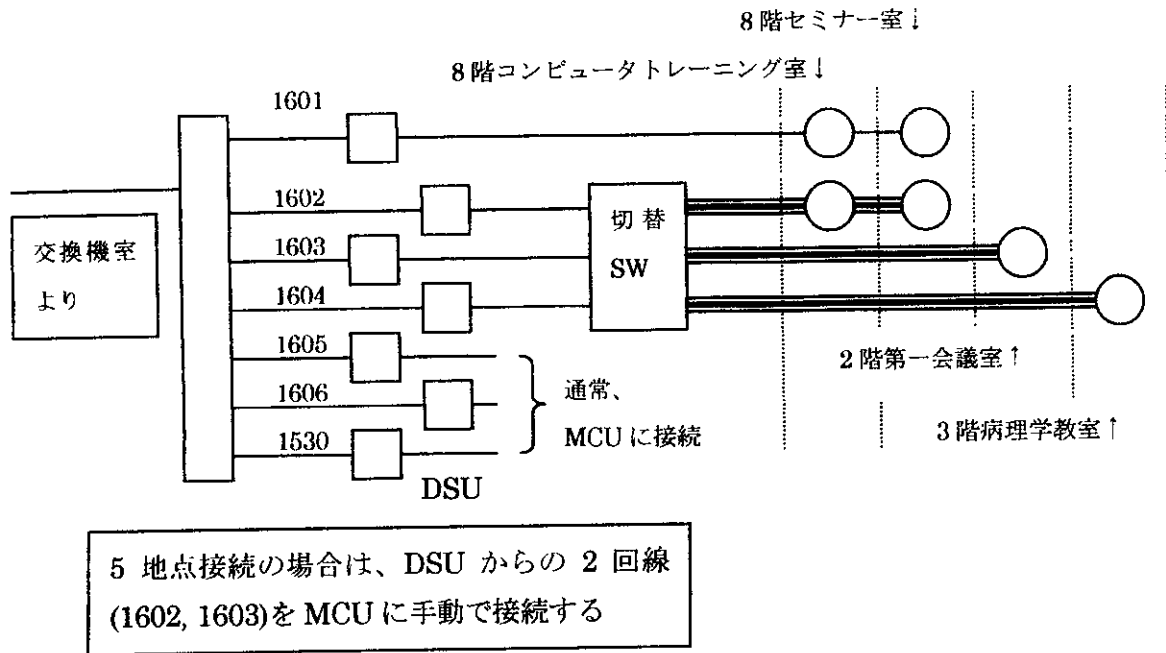
MCU の性能比較表

メーカー	NTT	PictureTel	NEC	Hitachi	VideoServer
製品名	Phoenix	Prism	MCU5000	MC-400	MCS 2000
接続数(最大)	20(60)	4(8)	4(14)	4(16)	8
接続速度	2B	2B,(6B,T1)	2B	2B	2B,(6B,T1)
入力切替		自動、手動	自動、手動	自動、手動	自動
データ共有	なし	T.120	静止画	静止画	T.120
レンタル	PictureTel				
本体価格		¥2,710,000	¥6,500,000	¥9,600,000	¥5,643,000
備考	T.120 未対応	他社端末(カナダで使用)に接続不能	T.120 未対応	T.120 未対応	本研究の全ての端末に接続可
価格 (8 拠点、T.120)	時間 5 千円程度 (T.120 なし)	¥7,580,000			¥10,287,000

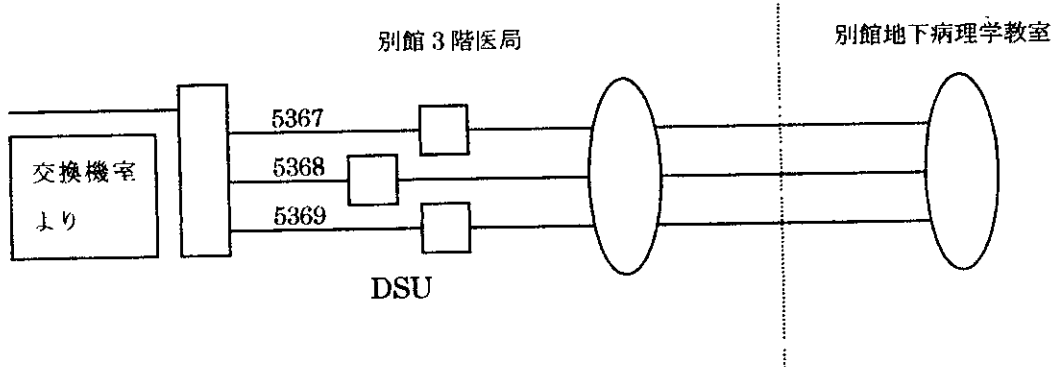
資料

TSDN 構成図

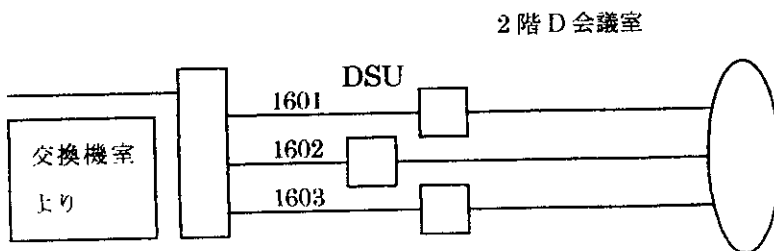
● 伊勢原校舎



● 東京病院

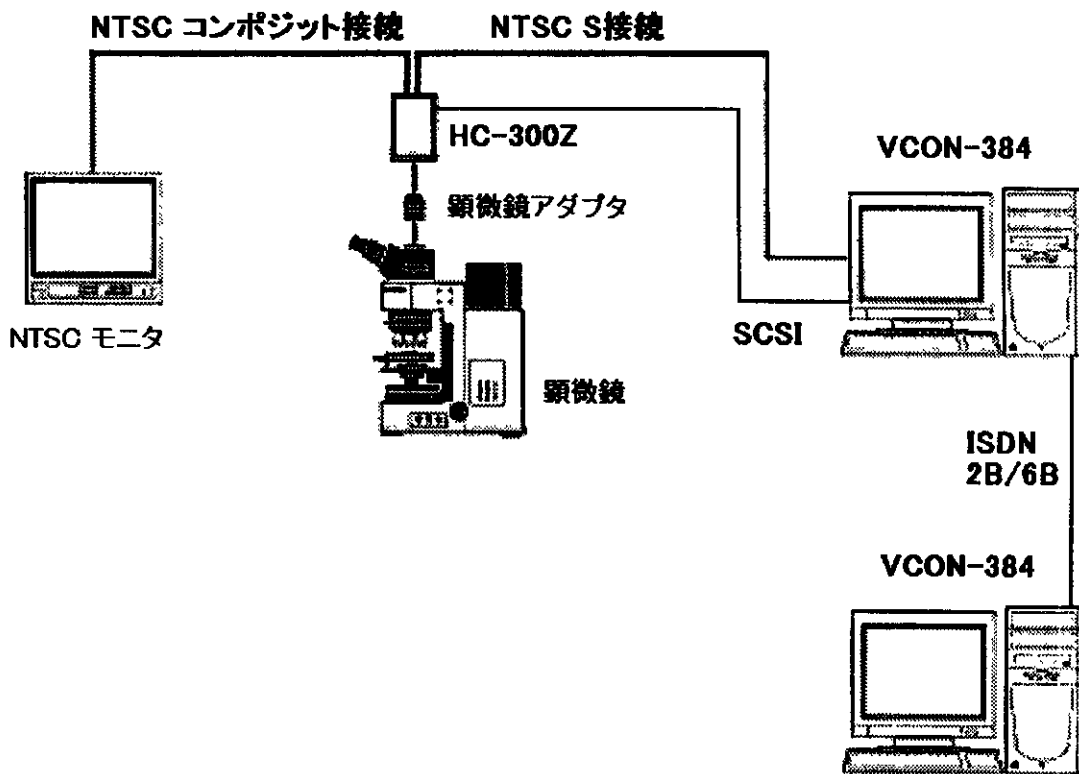


● 大磯病院



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テレパソロジーへの応用実験時の接続図



今回の実験結果

接続	2B	6B	2B+T120	6B+T120
画質	悪い	やや良好	(良好)	(良好)
操作性	非常に悪い	良好	(良好)	(良好)
その他	遠隔側からの操作不可	遠隔側からの操作可能	(遠隔側からの操作不可)	(遠隔側からの操作可能)

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