TELETEACHING MEDICAL PHYSICS: SYSTEM DESIGN AND FUNCTION

INTRODUCTION

Teleteaching is the process of using contemporary computer and communications technology to link students to a teacher who is not in the same physical location. It is an economical and efficient method for institutions to share faculty for the purpose of expanding the educational experiences provided to their students.

OBJECTIVES

The objectives for the design and implementation of an effective and efficient tele-teaching program include:

- Expanding the faculty capabilities of an educational program beyond the constraints imposed by economics and geographical location
- Retaining the advantages of traditional classroom teaching by providing for effective student-teacher interactions, communications, and discussion
- Improving the quality of teaching provided to students
- Reducing problems of scheduling student-teacher interactions
- Emphasizing the development and utilization of high-quality educational materials
- Increasing the capability of individual faculty to teach more students regardless of geographic location

SYSTEM DESIGN AND FUNCTION

The teleteaching system is designed to provide the following specific functions:

- Lecture delivery
- Transmission of selected educational materials
- Teacher-to-student transmission of objectives and assignments
- Two-way interaction and discussion
- Two-way data transfer
- Student-to-teacher transmission of completed problem solutions, papers, and tests

The system described here is assembled from readily available computers, software, and the Internet and is used by one of the authors (PS) located in Atlanta to teach medical physics graduate students and radiology residents at the University of Malaya in Kuala Lumpur, Malaysia.