

# Medical Image DataBase Management System

Jou-Jeih Chang, Liang-Chih Wu\* and Tsair Kao

Institute of Biomedical Engineering  
National Yang-Ming Medical College  
\*National PET/Cyclotron Center and  
Department of Nuclear Medicine  
Taipei Veterans General Hospital

## ABSTRACT

This study was undertaken to provide an integrated medical image database management system (MIDBMS) in order to increase the share of image data and decrease the loads of manipulation.

MIDBMS was built on the network system for accessing medical image data of image databases located at different sites. The data model of MIDBMS was relational with the use of distributed concept in designing the architecture of the database. Transactions were centralized at local site. We modified unique\_code and jacket method used in RIDBMS (Radionuclide Image Database Management System) to fit the requirement of the distributed environment. There were four function modules in MIDBMS, namely, user interface subsystem, data process subsystem, server connector subsystem, and image display subsystem. Dynamic data exchange technique was used to control the messages and data flow among subsystems.

In summary, MIDBMS provides a simple and integrated environment for different imaging modalities with the economization and efficiency inherited from RIDBMS. It plays an essential role on a medical picture archiving and communication system.

**Key Works:** PACS, distributed database, microsoft windows DDE, unique code.