Abstract

A large number of medical images in digital format is generated by hospitals every day. It is acknowledged that medical image databases are a key component in diagnosis. The increasing trend towards digitization of medical images creates a need of technologies for storage, and retrieval of medical images. The paper discusses how to query the medical images and presented a medical images management system based on the DICOM (Digital Imaging and Communications in Medicine) standard. Grids are a promising tool to build medical databases and to face health-related challenges involving computations over large datasets. Indeed, grids offer an infrastructure for sharing data and building virtual databases distributed over several medical sites and sharing processing power. Alchemi grid framework has been deployed to provide grid-based environment. Speeding up the retrieval and feature extraction processes was one of the major achievements of this work.


Index Terms

Computer Science  
Image Processing

Keywords

Alchemi  
Database Partitioning  
DICOM Standard  
Grid Computing  
Medical Imaging