

Development of PET-CT viewer on general Windows PC

K. Matsuda¹, T. Sasaki², S. Ehara³, M. Shozushima⁴ and K.Sera²

¹Dept. of Software and Computer Science, Iwate Prefectural University
152-52, Sugo, Takizawa, Iwate 020-0173, Japan

²Cyclotron Research Center, Iwate Medical University
348-58 Tomegamori, Takizawa, Iwate 020-0173, Japan

³ Department of Radiology, Iwate Medical University
19-1 Uchimaru, Morioka, Iwate 020-8505, Japan

⁴Department of Dental Radiology, School of Dentistry, Iwate Medical University
19-1 Uchimaru, Morioka, Iwate 020-8505, Japan

Abstract

Recently, Positron Emission Computed Tomography (PET) is widely used in clinical centers for diagnosis. Each PET-CT data set has many images (about 1000 images). Therefore, it costs much time for diagnosis. The purpose of this study was to develop a system that reduces the time of diagnosis. We have developed a new interface for PET-CT Viewer system on General Windows PC. In general PET-CT system, user needed to change Max-Min parameter repeatedly, to show Region of interest (ROI). We have developed an algorithm that decides Max-Min parameter automatically with selecting rectangle area on PET image. As a result, our system can calculate in a moment (response time is less than 10ms) and show ROI quickly. If user can't obtain ROI that is the user imagine, the user can retry to select ROI because of the response time.