

X-ray examination is an important part of the medical treatment. Despite all the advantages it introduces, it brings some limitations as well. In the present work we describe a technique that from the acquired CT data reconstructs a digital x-ray image and removes some drawbacks of traditional x-ray screening. Among the most significant improvements over the classical radiography belong generation of the screen from very arbitrary angle and interactive rotation of the image in real-time. In order to obtain the most realistic final image, we put the emphasis on the accurate simulation of physical properties of the x-ray radiation. We also try to get as low computational time needed to gain one image as possible. For this purpose we present a parallelization model that decomposes the required work of some components into several processors' cores and thus noticeably decreases the running time of the algorithm.