

The aim of my diploma thesis is to find optimised solution for work places equipped with multi-detector computer tomograph (further on just MD CT). This apparatus is located at the First Medical Faculty and General Hospital of Prague. At the beginning of my thesis I focus on the formation of X-rays and its character, as the main principle that computer tomography uses. Further on I mention history and evolution of this method from the very beginning towards present. The main part of my thesis then tries to find optimised solution for work places mentioned above. The first thing I am dealing with is the patient's examination itself. The amount of time the patient needs all the way from preparing for the examination, the examination itself to leaving the examination room. For an objective evaluation of these time periods I made up my own examination time schedule, which I followed during my research. This time schedule is also discussed in this chapter. Second part focuses on data processing and evaluation of the examination. I also tried to find out the time necessary for examination, but it is technically impossible; each diagnosis is different, we cannot find any objective aspects which we could follow to determine time necessary for establishing the diagnosis.