

This thesis deals with possibilities of use of multimedia technology in physics education and describes a few new educational units. First chapter of the thesis contains a short definition of multimedia and a brief summary of the importance of multimedia in general. The main merits of the thesis are the four chapters regarding individual multimedia technologies. Firstly, the potentialities of utilization of video records in physics measurements are discussed, including a few new experiments. The second main topic is the slow motion video, its importance, use in physics lessons and the description of a series of recorded slow motion video clips. As the next point, the use of a computer sound card as a measurement tool in innovative experiments is discussed. Finally, in the last chapter a series of newly created computer programs for visualization of hydrogen atom orbital shapes is characterized. The created educational units have been tested and classroom experience, students' or teachers' feedback are presented in corresponding chapters.