

Physics Interactive Materials Program

Hassan, Mohammed

Ahmed, Sarhad

Ahmed, Raman

Is a program that teaches physics in an interactive way. The program is divided into sections according to the areas of physics and each section is further divided into sub-areas. The program helps teachers teach difficult-to-understand subjects in physics easier because it allows the teacher to make experiments in a virtual environment, thus saving a lot of effort and time for the teacher. The program allows the teacher to change variables and physical properties of the object in the experiments, when changing physical properties of objects, the resulting effects are animated. Teachers can also use this program with nowadays technologies like Smart Boards and Tables. Because the students can see the relationships with and effects of objects on each other in a visual manner, the program also aids students in understanding the subjects. The program's use of 'suited' user interfaces like 'sliders' makes the program much easier to use. Because 'sliders' enable gradual value changes, they are used for changing physical properties of objects like density, mass, volume, etc. The resulting effects of gradual changes in objects properties are immediately animated, thus helps students understand the relationships between physical properties of object and the resulting effects. The program is cross-platform, light, user-friendly and easy to use, it was designed in the Adobe Flash Professional IDE using the Action Script 3.0 Programming Language. Adobe Flash Professional was chosen because it offers great visual capabilities and linkage between code and graphical elements.