

T1_1 MULTIMEDIA APPLICATION FOR TEACHING THE BASICS OF LIGHTING IN PHYSICS CLASSES

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The creation of a simple or an interactive multimedia (MM) system can improve the presentation of a project and, in the case of the study of lighting, it can facilitate the appropriate decision-making processing. The use of text, graphics, images, animations, video, and sound in the case of a study provides a more impressive and more complete way of presentation. Apart from those, such an MM application can be used effectively in physics teaching and learning schemes as it provides information about lighting in an interactive mode. This paper gives a case study of the effects of lighting in a residence in Athens. Its interior and exterior spaces were photographed in daylight and artificial lighting. A simple MM presentation via a 3D model with animation has been prepared. The illuminance values for the specific day and hour that the photograph were taken have been provided from respective measurements of the National Observatory of Athens. The case study reveals: a) The appropriateness of the MM presentation in a lighting design, b) The appropriateness of the MM presentation in teaching lighting in a physics class, c) The MM application developed is appropriate for decision making in the case of choosing the useful lighting in interior spaces, d) The MM application developed is also appropriate in educational and training (seminar) schemes and e) The long-term objective of the study is the complete presentation of proposals and ideas, concerning the lighting of a space, with all the aesthetic aspects.