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REALISTIC VISUALIZATION OF INTERIORS

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The efficiency of modern computers and the rendering technologies applied in Autodesk 3dsmax allows to create photorealistic visualisations. The quality of this visualisations are very similar to the photos of real objects. This possibilities are especially important for students of Interior Design course at The Faculty of Architecture in Silesian University of Technology. Theirs skills in creating a realistic visualisations of projects have results in a good marks and better position in a architect branch. The needs of become skilful in creating visualisations results from the educations effects determined for the Interior Design course as below:

- – The knowledge about computer tools in visualisation
- – The skills in realisation own artistic conceptions (drawing, painting, sculpture, modelling, computer graphics).
- – Basic skill in creating the space by light and ability to use the colour in interior.
- – Ability to use a computer programs (architectural designing, visualisations)

Since 2005 the Geometry and Engineering Graphics Centre has been running courses of visualization the architectural objects using Autodesk 3dsmax program. Our so far experience shows that the classes are popular among the students of architecture and civil engineering. Course participants become skilful in 3D modelling, texturing, and lighting. The course curriculum has been designed in two levels, 15 hours of classes for each level. In first basic level the simple modeling techniques are used, for example: extruding, beveling, Boolean operations. The visualization of detached house is the result of this level. This visualization is performed with using a standard materials and lights.

The visualisation of interior is a subject of second level course. Modelling of furnishings is carried out with using Nurms surfaces, "Graphite modeling tools" and objects modifications which simulates a different kinds of fabrics. The Mental Ray technique is used in rendering. This technique of rendering requires of using a special materials which cooperate witch Mental Ray. Moreover the "MR daylight system" is used to illuminate interior of building. The simulation of night light is carried out with "MR photometric light". Light distribution is configured by using IES profiles (Fig 1).

Fig.1 The interior visualization created within Autodesk 3dsmax course with using Mental Ray rendering technique

Final results in rendering is made up with many elements like properly made 3D model and realistic suitably selected materials. Moreover the simulation of indirect illumination is essential to achieve a good results in interior visualisation. In the presentation a new modelling, mapping and illuminating techniques, which allows to obtain photorealistic visualisation will be presented.