Improved reproduction and visualization of effect pigments

The recent advances in digital technologies are playing an important role in the improvement of some industrial processes such as computer-aided design and manufacturing, virtual prototyping, and scientific visualization and simulation. However, producing realistic appearance images is very challenging taking into account the high sensitivity of the human visual system. The *visual appearance* of products is still an important aspect to take into account even for the digital simulation of materials, since the appearance of these simulated products on the screen is still a critical parameter in the purchase decision of customers. In particular, the digital rendering of effect pigments is a very active hot topic since this type of coatings changes considerably its visual attributes such as color and texture with the illumination/viewing geometry. This talk is about a method for accurate digital simulation of effect coatings, by developing a multispectral and physically based rendering approach on a simple iPad tablet computer. In addition, visual evaluations were done to corroborate the high color accuracy of the rendered images.

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