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Rendering: Input and Output

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Abstract

Rendering is the process of creating an image from numerical input data. In the past few years our ideas about methods for acquiring the input data and the form of the output have expanded. The availability of inexpensive cameras and scanners has influenced how we can obtain data needed for rendering. Input for rendering ranges from sets of images to complex geometric descriptions with detailed BRDF data. The images that are rendered may be simply arrays of RGB images, or they may be arrays with vectors or matrices of data defined for each pixel.

The rendered images may not be intended for direct display, but may be textures for geometries that are to be transmitted to be rendered on another system. A broader range of parameters now need to be taken into account to render images that are perceptually consistent across displays that range from CAVEs to personal digital assistants. This presentation will give an overview of how new hardware and new applications have changed traditional ideas of rendering input and output.