

Image Generator Graph

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ABSTRACT

Image generators often use scene graphs to organize visual databases. The graphs are made of group, transform, level-of-detail, switch, and geometry nodes in a hierarchy. A similar concept, an Image Generator Graph, can be used to create an image generator. The underlying scene graph or rendering engine can be compartmentalized into image generator graph nodes. Other nodes of the image generator graph organize the structure of the image generator. As an abstract concept, an Image Generator Graph can be used to implement programs that are not based on a scene graph. This paper examines an abstract Image Generator Graph architecture. Three concrete implementations of the Image Generator Graph are discussed: an image generator based on OpenSceneGraph, an image generator driver program based on a GUI toolkit, and a communication library to drive an image generator.

BIO

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Tom Jolley is an engineer at The Boeing Company. He has been involved with sensor and out-the-window image generation for over 30 years. He has designed image generation hardware and image generation software. Mr. Jolley also teaches computer architecture at Washington University in St. Louis in the Joint Engineering program with the University of Missouri – St. Louis.