**Goal**
- to create a conceptual framework for non-photorealistic rendering (NPR)
- to allow the creation of NPR algorithms by developers, programmers, and designers using this unifying system
- support many different NPR techniques and allow for various combinations of these

**Modular Scene Graph Architecture**
- based on Open Inventor scene graph architecture
- using Open Inventor's basic functionality and its VRML based scene descriptions
- extensions through new nodes and elements for NPR algorithms and data
- geometry data structure for local connectivity information: Winged Edge

**Classes of Algorithms**
- stroke based methods
- image based methods
- surface based methods
- any combinations of the above

**User Classes**
- **developer**: has the scientific knowledge to come up with new algorithms and techniques to produce an effect
- **programmer**: takes these algorithms and turns them into basic building blocks for rendering pipelines
- **designer**: knows how to combine these building blocks and, thus, how to create different rendering pipelines
- **end user**: looks at created renditions or uses applications

**Example Applications**
- silhouette rendering
- image modifications
- painting in 3D
- stippling
- real-time techniques
- animation
- designer interaction

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OpenNPAR
A System for Developing, Programming, and Designing Non-Photorealistic Animation and Rendering

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