Sculpting 3D Models

Dorsey & McMillan

- Combines the fidelity of a boundary representation with the flexibility of a volumetric model
- Interactive surface modification
  - Rich set of shaping tools
  - Tools for simulating natural processes
  - Tactile feedback
- Multi-resolution
  - Adaptive rendering speed
  - Quality and resolution on-demand

FOR MORE INFO... see www.graphics.lcs.mit.edu
3D Surface Exploration

Next: Stage II

• Integrate head-tracked stereo display with haptic interface

• Large format plasma display
  - Virtual working surface
  - Usable in ambient light
  - Flat (no projection volume)

• Natural interface
  - Aids comprehension
  - Direct manipulation of surfaces
  - Interact with simulation

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Future Directions

• Multiuser stereo displays
• Modeling layered and composite materials
• Virtual user-guided simulation environments
• Materials that deform, change shape and appearance through manipulation
• Next generation 3D modeling system

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