Platform-independent shader development with mental mill®: the making of Dead Rising 2

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Platform-independent shader development with mental mill®:
the making of Dead Rising 2
mental mill: integrated visual development environment (IVDE)

Artists and shader writers can

- develop
- test
- manage

shaders written in MetaSL™
MetaSL: high-level, platform-independent shading language

Artists and shader writers can develop for

- every platform
- different contexts
- evolving rendering algorithms
- rapidly advancing GPUs

future-proof shader assets
mental mill is more than just another shader graph editor

As GPU’s and rendering algorithms become more powerful it becomes increasingly more difficult and more costly to:
  • create and maintain shader assets
  • share shader assets between different media/content

Artists can build shader graphs that allow them to experiment and develop the look of their game assets independent of the shader programmers, without being limited by the implementation details.
mental mill data flow overview
Build shader graphs from the included library of Metanodes™
Phong shader in MetaSL render
Debugger ‘get info’
Phong shader
debg mode
evaluate RS
Phong shader debug mode evaluate specular
Phong shader debug mode specular*RS
Add a texture and a reflection to the Phong node
Create a Phenomenon from the Phong shader graph

Encapsulate a shader graph to:

- simplify attributes
- protect a developed look
- reuse in creating shader graphs
Reuse a Phenomenon inside another Phenomenon
mental ray® preview renderer plug-in
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What version of mental mill do I need?

**Artist Edition**: bundled with Autodesk 3ds Max®
- Metanode library to build shader graphs and Phenomena
- 3ds Max viewport and mental ray rendering
What version of mental mill do I need?

**Standard Edition:** available from mental images
- Everything in Artist Edition
- Integrated shader editing and visual debugging tools
- Customizable back-end formats for CgFX, HLSL, and GLSL
- Back-end plug-ins for Maya, Softimage, CATIA, and FX Composer
- mental ray preview plug-in
What version of mental mill do I need?

**Integrator Edition:** available from mental images

- Component mental mill API libraries for integration into:
  - Design and DCC applications
  - shader pipelines
How to learn more about mental mill

Online:
★ Website: http://www.mentalimages.com
★ Forum: http://forum.mentalimages.com

During GDC:
★ Expo Suite 656, West Hall