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GAMETOOLS

**Advanced Tools for Developing
Highly Realistic Computer Games**

GOALS: Developing 3D libraries in the areas of Visibility, Geometry & Lighting to increase Realism & Visual Quality in:

1. Computer Games
2. Graphical Simulators
3. Industrial Models
4. VR environments

- The libraries are free.
- Join the GTP Special Interest Group, to get access to GameTools technology right now.
- The GameTools Project is funded by the European Union to support the European 3D software industry.

Geometry

- A fast image based simplification algorithm to efficiently create hight quality MLODs without human intervention.
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- Multiresolution triangle strip generation taking into account topology and texture of the base model.

- A memory & runtime compressed multiresolution mesh format that contains triangle strip information, avoiding the need for costly on-the-fly tristip generation.

- A new multiresolution model specially fitted for plants allowing for an incredible amount of close up detail for e.g. leaves.

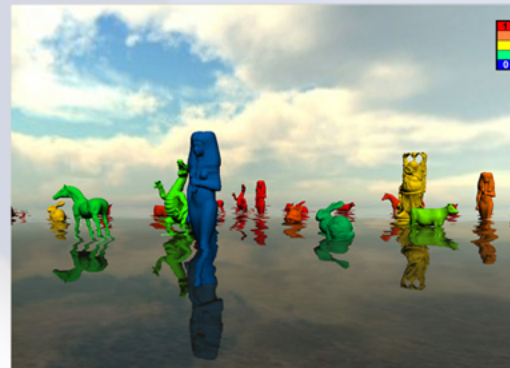## Illumination

GameTools brings physically correct rendering to the domain of realtime graphic.

Effects that will be possibly incude:
- Soft Shadow / Lighteffects
- Dynamic Lightsources
- Indirect Illumination
- Reflections
- Realtime Radiosity
- Hight-Quality Materials
- Cloud Rendering

Visibility

The GameTools VisibilityLib renders faster by only displaying the visible objects in your scenes through:
1. Fast precalculated visibility based on modern visibility research.
2. Efficient visibility for dinamically changing scenes employing modern day graphic hardware.

Both approaches work for indoor & outdoor scenes, and are much faster and flexible than existing techniques.