3D luminaire geometry with Relux Vision

Siegbert Debatin
Relux Informatik AG
Contents

• What is Relux Vision
• Principles of luminaire geometry
• Geometric layout of a luminaire
• Luminous layout of a luminaire
• Export to Radiance
• Examples
• Problems
• Conclusion
What is Relux Vision

- Relux is an easy to handle tool for (nearly) all kind of light planning.
- Relux is also a consortium of manufacturers, who distribute their data with the program.
- Vision adds Radiance functionality to Relux.
Principles of luminaire geometry

Each luminaire illuminates:
• its environment
Principles of luminaire geometry

Each luminaire illuminates:
• all other luminaires
Principles of luminaire geometry

Each luminaire illuminates:
• parts of itself
Geometric layout of a luminaire

Subdivision of a luminaire into
• measured geometry (light emitter)
• additional geometry
Geometric layout of a luminaire

Examples

- Measured geometry
- Measured geometry with additional geometry
- Multiple measured geometries with additional geometry
- More complex types
Luminous layout of a luminaire

- Insertion point of photometry
- Light emitting surfaces (real and virtual)
- Materials
Export to Radiance

- Light distribution curves of all types are automatically converted
- Measured geometry will be embedded into an illum box
- Light emitting surfaces get a glow
- Additional geometry is handled as is
Examples
Problems

„illum“ as an area light source can cause
• Visualization errors
• Wrong measurement results

Possible solution:
„illumEx“: an illum with an assigned geometry (mesh), which casts no shadows in the direct part
Conclusion

- Relux offers luminaire database with complete luminaires
- Powerful 3D format
- Market pressure for 3D geometry
- Publically available
- Export for Radiance