ECLAT DIGITAL

www.eclat-digital.com

OCEAN

SCIENTIFIC RENDERING & LIGHTING ANALYSIS

Digitize your physical sample to a reliable virtual material for accurate in situ visualization

SCIENCE BASED TECHNOLOGY

Ocean™ uses spectral measurements to generate physically true images and data for engineering applications that require appearance accuracy.

	OCEAN Virtual prototyping	3D Rendering
APPEARANCE ACCURACY		
✦ Spectral data	✓ Yes	✗ No
✦ Polarization effects	✓ Yes	✗ No
✦ Material complexity	✓ Very high	✗ Basic
PHYSICAL ORIENTED		
✦ Physical units	✓ Yes	✗ No
✦ Optical measurements	✓ Yes	✗ No
✦ Colorimetry	✓ Accurate	✗ Unreliable
3D MANAGEMENT		
✦ Scene complexity	✓ Very high	✓ Very high
✦ Polygon number	✓ Very high	✓ Very high

PREDICT YOUR MATERIAL APPEARANCE
At scale & in situ, in real-world conditions

ANALYZE OPTICAL PERFORMANCES
For R&D development or specification needs

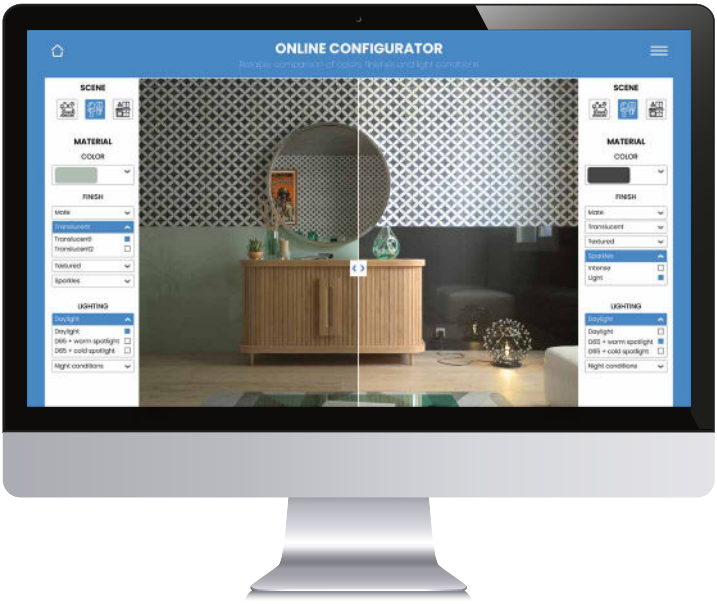
ONLINE CATALOGUE & CONFIGURATOR

ISSUES

- Require a higher degree of visual accuracy than traditional online catalogs.
- Need realistic in situ visualization.

Ocean™ generates highly accurate renderings for online catalogues that simulate real-world scenario, enabling end-clients to test & compare materials against aesthetic & technical requirements efficiently.

- Examine materials in different scenarios
- Test scenes and lighting conditions
- Observe subtle visual effects in real-world conditions



BENEFITS

- Powerful differentiation asset
- Improve conversions
- Enhance customer trust
- Faster decision-making

RESEARCH & MEASUREMENTS

VIRTUAL OPTICAL LAB

With less than 0.1%* deviation from real-world measurements, Ocean™ is a valuable asset for R&D, providing **PRECISE VIRTUAL MEASUREMENT TOOLS** to validate optical models and prototype new materials.

*CIE 171:2006

TOOLS & FEATURES

LIGHT QUANTIFICATION TOOLS:
Glare analysis, photometry, radiometry, spectral imaging, colorimetry, illumination maps, irradiance views...

VIRTUAL INSTRUMENTS & SENSORS:
Integrating spheres, 45:0 spectrophotometer BSDF capture instrument... Fisheye, spherical, orthographic, abberated, standard cameras...

ADVANCED TECHNOLOGIES:
Full-spectral calculations, exact solution of geometric optics, bidirectional path tracing, light polarization...

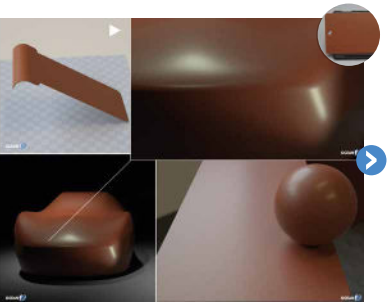
OPEN FORMATS:
To ensure the best control over your input and output data.

DEVELOPMENT & SPECIFICATIONS

ISSUES

- Develop material with complex visual effects.
- Need to understand its optical behavior on various shapes & environments.

Ocean™ : a single tool to evaluate optical & aesthetic performances. Create custom scenarios to accurately visualize challenging materials:



applied to specific geometry

in interaction with real-world light & environmental conditions

to obtain accurate image & data sets for your own use.

BENEFITS

- Reliable environment for observations
- Speed up the iteration process
- Accelerate communication with internal & external stakeholders

OCEAN

VIRTUAL PROTOTYPING SOFTWARE

Your solution to accelerate time to market, reduce waste and optimize product design

Take a look at our use cases

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