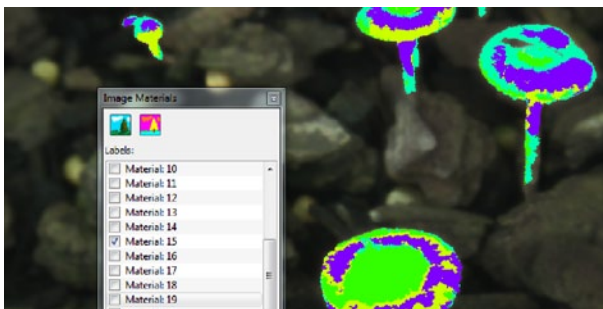
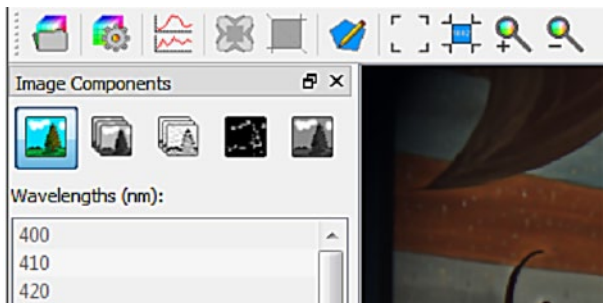


Scyven Hyperspectral imaging

Traditionally, hyperspectral imaging systems were extremely expensive, limiting their use to specialised areas. With the growing availability of less expensive systems, hyperspectral imaging is broadening into areas such as forensics and agriculture (plant health, precision agriculture) and beyond.

Scyven is a software tool that makes hyperspectral imaging and analysis easier and more intuitive - putting powerful image processing capabilities in the hands of both experienced and inexperienced users.

Scyven allows hyperspectral images to be saved in the open HSZ (Scyllarus hyperspectral zip) format, enabling compression rates of 10:1 and above.



Features

- Simple one-click workflow – run Scyllarus to automatically recover illumination, reflectance and materials.
- View and compare multiple images simultaneously.
- Load and save hyperspectral image data in ENVI and HSZ formats.
- Load and save portable workspaces – pick up exactly where you left off or share workspaces.
- Polygon tool to select image regions and export data in CSV format.
- View colour reconstructions of hyperspectral images.
- View individual image bands.
- Crop, resize and remove image bands.
- View detailed image information using graphical plots for illumination, radiance and reflectance.



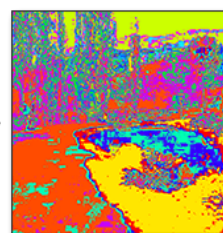
Preprocessing



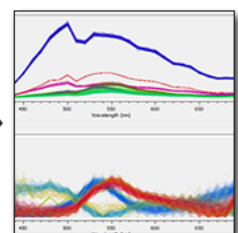
Illumination Recovery



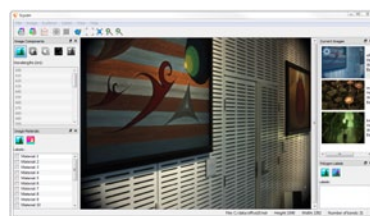
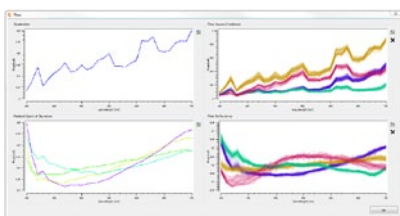
Reflectance Recovery



Material Clustering



Analysis



What does it do?

Scyven is an automated GUI application that allows convenient access to Scyllarus' processing tools. After any pre-processing, the image's illumination is found and this in turn is used to recover the reflectance properties of the scene. From there, material clustering can be performed and then the results can be analysed and exported.

Requirements

Windows 7, 8 or 8.1 (x64) or Ubuntu 14.04 (x64).

Multi-core processor recommended.

Minimum 4GB RAM, 16+ GB recommended for large/many images.



SCYLLARUSTM

Beyond Vision

At www.scyllarus.com you can also find information on:

- The Scyllarus C++ API – a highly optimised, state-of-the-art HSI engine that simplifies hyperspectral imaging; available for evaluation on application.
- The Scyllarus Matlab toolbox for the research community; evaluation download available;
- The HSZ format – An open file format enabling high compression rates for hyperspectral images; and
- Downloadable datasets for testing and research.

About NICTA

NICTA is Australia's Information and Communications Technology (ICT) Research Centre of Excellence, driving innovation through high quality research, research training, commercialisation and contract research.

NICTA has the largest concentration of ICT researchers in Australia. Our research focuses on use-inspired basic research that benefits industry, the community and the national interest.

Since NICTA's inception in 2002, NICTA has built strong research capability in:

- Software Systems
- Networks
- Machine Learning
- Computer Vision
- Optimisation.

Our Business Teams are the market focus of our research capabilities:

- Broadband and the Digital Economy
- Infrastructure, Transport and Logistics
- Security and Environment.

NICTA researchers work on Business Team projects supported by:

- An Engineering and Technology Development Team
- IP, Legal and other professional support.

Our work as a world-class research institute and Centre of Excellence in science and innovation brings together many of Australia's and the world's top ICT researchers. NICTA provides them with the facilities and support they require, making imagination to impact a reality.

NICTA's unique approach fosters and develops ICT research. We work closely with both industry and other research institutions to solve problems and make breakthroughs in ICT with real impact. NICTA's focus on use-inspired research means our projects have direct relevance to the challenges faced by business, government and individuals around the world. The result is breakthrough technologies that provide commercial opportunities and have a positive impact on Australia's export earnings.



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