Gerbil: A Hyperspectral Image Analysis Framework

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GERBIL *helps you to...*

- explore a multispectral or hyperspectral image **before** processing it
- apply common computer vision algorithms
- label image pixels for your application scenario
- assess your algorithms on high-dimensional data
- teach hyperspectral imaging, reflectance analysis

Spectral gradient

A powerful descriptor for material, reflectance effects

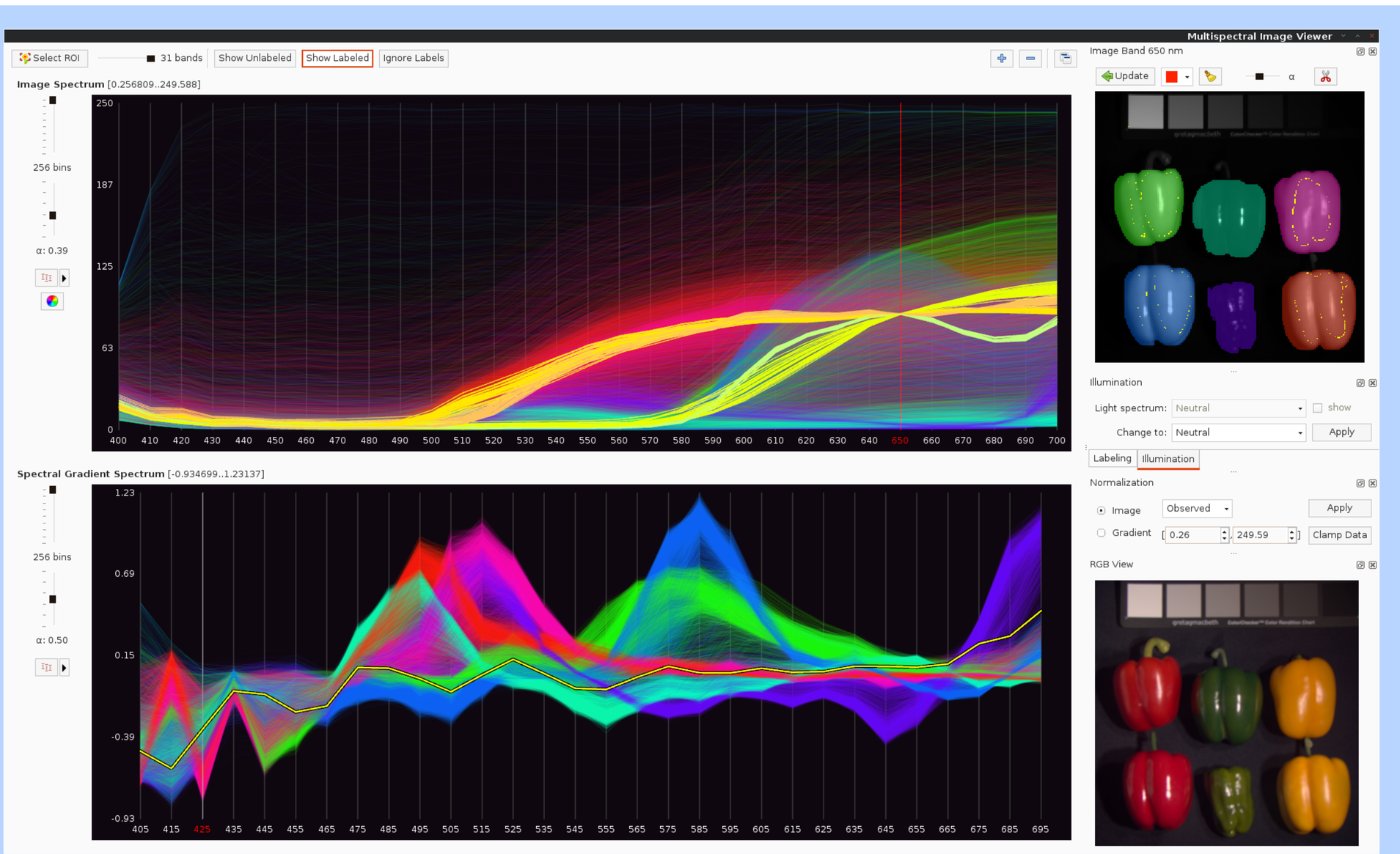
Novel Visualization

Parallel Coordinates visualize spectral distribution

- real-time representation of full image data
- instant connection of topology and spectrum
- interactive step-by-step data exploration

Segmentation & Clustering

- **Power watershed** supervised segmentation
- **Fast Adaptive Mean Shift** clustering



Dimensionality Reduction

- Principal Component Analysis and XYZ colorspace computation for false-coloring
- **Self-organizing Maps** for visualization, edge detection, supervised segmentation

Illuminant Control

- Normalize data according to illuminant
- Simulate different illuminantion conditions

Free & Easily Extendible

Use the open-source GERBIL in your research!

- free software under the terms of GPLv3
- modular design based on C++, OpenCV
- multispectral data I/O and internal data handling
- GUI and command line interface for experiments

Download for Windows, Linux, OS X:

`http://www.gerbilvis.org`