Little CMS professional

PDF Gamut



PDF Gamut

3D gamut visualization, comparison, and color analysis

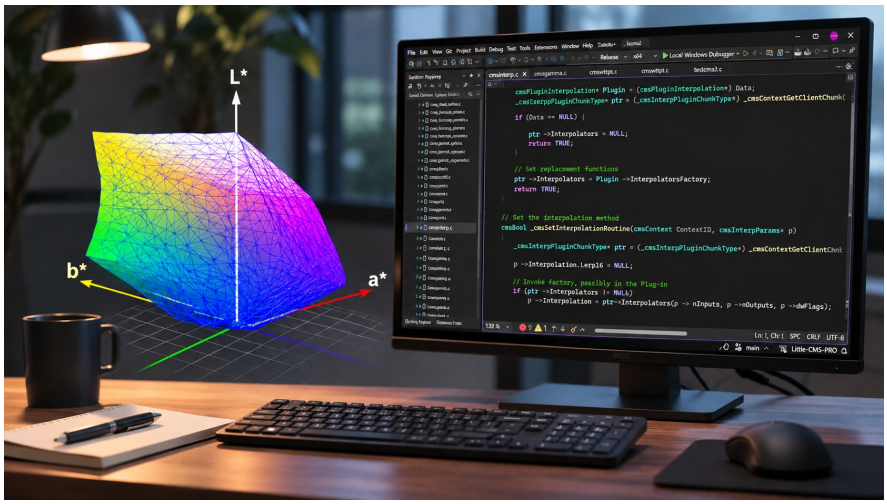
SEE WHAT YOU CAN REPRODUCE.
MEASURE WHERE COLORS DIFFER.

LittleCMS PDFGamut lets you **build, overlay, and compare 3D gamuts** from ICC profiles, images, PDFs, spot-color libraries, and measurement data. See where gamuts overlap, compare their volumes, and quantify how far individual colors fall outside a reference gamut. **Verify ICC profile predictions against measured prints**, compare spectral data under different illuminants, or check PDF pages and spot colors against a target print condition. Share your findings in customized reports.

PDF Gamut brings ICC profiles, images, PDF documents, spot-color libraries, and measurement data into an interactive 3D viewer. Overlay gamuts to see where they differ in hue and lightness, compare their volumes, and check individual colors against a reference gamut. Use it to compare devices, inks, and papers, or to assess whether a particular print condition can reproduce the colors you need.

3D GAMUT COMPARISON AND COLOR ANALYSIS

- **Build and compare 3D gamuts from profiles, images, and measurements.**
- **Check spot colors against a target gamut and quantify differences.**
- **Verify ICC profile predictions against measured print patches.**
- **Preflight PDF pages, vector graphics, and embedded images.**



PDF Gamut shows where color differences occur and how large they are. Color-coded 3D vectors show the direction and magnitude of differences for individual spot colors. Heat maps locate out-of-gamut areas within embedded PDF images. With spectral measurements, you can examine how calculated colors change with the illuminant or observer.

BENEFITS

- **Choose a print condition based on the colors you need. .**
- **Identify brand colors that may need an alternative.**
- **Flag PDF pages that need attention before production.**
- **Find the patches with the largest profile prediction errors. .**
- **Compare spectral colors under different illuminants.**
- **Share findings in customized reports. .**

Features

Gamut visualization and comparison		
Interactive 3D gamut viewer	Overlay multiple gamuts and point clouds.	●
Supported file formats	PDF, ICC, JPEG, TIFF, PNG, CGATS/IT8 based, CxF/X-4 and earlier including spectral, Adobe ASE, ACO, ACB and Excel CSV. Imports measurement files from most instrument manufacturers.	●
Convex and concave gamut models	convex hull or use alpha shapes	●
Quantitative gamut comparison	Compare volumes in Lab^3 and identify colors outside a reference gamut using a chosen tolerance.	●
Seven color-space views	Explore CIE Lab, XYZ, LMS, OKLab, DIN99, ICtCp or JzAzBz while preserving the original Lab values.	●
Selectable color-difference metrics	Choose CIE76, CIE94, CMC, CIEDE2000, DIN99, ICtCp or JzAzBz independently of the display space.	●
Image color clouds	Display a raster image as a bubble cloud of up to 10,000 distinct colors.	●
PDF color extraction		
Page-by-page PDF gamut checks	Compare each page against a target ICC profile and identify pages that exceed the selected tolerance.	●
Selective PDF color extraction	Examine vector graphics, spot colors and embedded images separately.	●
Complex PDF color spaces	Analyze device and calibrated colors, CIE Lab, ICCBased, Indexed, Separation and DeviceN, including Indexed palettes built on DeviceN.	●
PDF output intent and gamut checks		
Embedded Output Intent	Optionally use the embedded ICC profile to interpret matching device colors.	●
Out-of-gamut image heat maps	See which areas of an embedded PDF image contain colors outside the target gamut.	●
ICC profile analysis		
ICC profile gamut comparison	Overlay profiles for different devices, inks or papers. Inspect differences by hue and lightness and compare gamut volumes.	●
ICC profile verification against measurements	Use the original device values from a measured target to test an ICC profile's predictions. Review average, maximum and per-patch ΔE.	●
Spectral data, spot colors and reporting		
Spectral reflectance analysis	Calculate Lab from measured reflectance spectra	●
Custom illuminants and observer functions	Load illuminant spectral power distributions and observer color matching functions from CGATS files.	●
Patch-by-patch measurement comparison	Compare corresponding CGATS patches. Inspect ΔE distributions, identify the largest differences and follow color shifts as vectors in 3D.	●
Named spot-color checks	Search swatches by name, inspect Lab and LCh values	●
Customizable HTML reports	Use your own layout and logo to report page results,	●
3D gamut export	Export a gamut hull as VRML 2.0 or save the current view as PNG, JPEG, BMP or TIFF. Export color lists as CGATS.	●

● Available