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Integrate automatic individual image analysis and enhancement into your workflow.

For fast processing of high volumes of images while achieving cost reduction and improving quality, printers and publishers rely on a professional automated workflow.

Claro technology, based on Claro Individual Image Analysis, automatically and individually analyzes images of varying type and quality. It delivers information on parameters such as sharpness, contrast, brightness, color balance, natural greens and blues, skin tones, Exif information, etc. It then solves possible issues and automatically delivers consistently superb image quality. Elpical Claro Single in an integration module for automatic image processing fits seamlessly into many standards-based workflows such as Enfocus Switch® or Puzzleflow®. Through its command line interface it can also easily be integrated in home-grown workflows.

Claro Individual Image Analysis

Automatic image enhancement is a real challenge. What is good for one image is not good for the other. Although it seems contradictory, automatic image enhancement needs an individual approach.

With its Claro Individual Image Analysis, Claro analyzes every individual image thoroughly, looking for such parameters as sharpness, brightness, contrast, color balance, natural greens, skin tones, Exif information ... and more.

This extensive individual analysis is fundamental to Elpical's image enhancement technology. Because of this fundamental approach that the Claro products achieve consistent high-quality results even when the origin and quality of the original images vary significantly.

Claro utilizes superior enhancement techniques. The sharpening that will be applied to a given image varies in amount and threshold, depending on the sharpness and (reduced) noise levels in the original image, a sophisticated anti-halo filter is applied to reduce the undesirable side effects of sharpening, it will even reduce existing JPEG artifacts. Claro's local contrast-enhancement allows for details to be preserved and enhanced both in the bright as well as in the dark areas of the image, without effecting overall brightness of the image. Individual image analysis ensures that this technique is only applied to images that require it.

Benefits

- Provide consistently high-quality image enhancements across varied individual images
- Save massive amounts of time on producing image-specific enhancements
- Process with confidence, knowing Claro Single will only enhance images where needed, perform in-file PDF image enhancement, as well as image output with correct ICC profiling
- Seamless integration into existing workflows with minimal set-up (Enfocus Switch® and Puzzleflow®)



Press & Publishing

System integrator &
Software developers

Photo processing
for web & print

Printing & Copying

Key Features

General

- Claro Individual Image Analysis (CIIA) for automated image enhancement based on each image's specific requirements
- Consistent image enhancements across a wide range of image types (TIFF, JPEG, DCS-RAW, Photoshop EPS, BMP, etc.)
- File output support for TIFF, JPEG, EPS, PSD, GIF, PNG (including original layers, compatibility layer and processed layer)
- Multi-platform availability
- Up to 4 parallel image-processing threads for maximum performance and multi-processor capability

Output file format	PSD
Output PSD options	Yes
Keep original layers	Yes
Original as layer	Yes
Processed as Layer	Yes
Add compatibility layer	Yes

- XML job file support for easy integration into existing workflows
- High level memory management

Image optimization

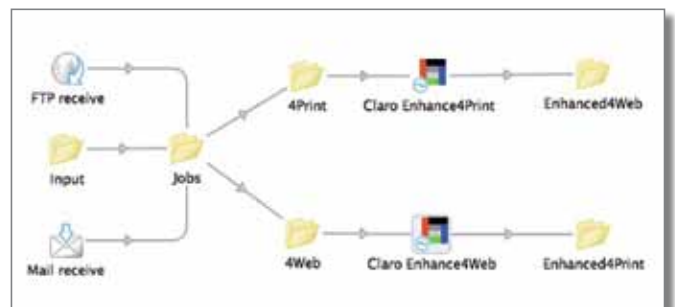
- Local contrast enhancement of image details with respect for overall image brightness
- Superior control over and dynamic optimization of sharpness, brightness, saturation, noise, black point/white point, and color balance
- Reduce JPEG artefacts
- Skin-tone specific recognition and treatment, differently than other objects in the image to achieve natural looking people.

Image processing

- Images inside PDF files can be enhanced, resampled and color converted
- ICC based color conversions and profile assignment & embedding
- Device link profile conversions
- Influence rendering intent based on out-of-gamut percentage
- Resampling and resizing of images
- Grayscale conversion
- Add processing data in the XMP data of the processed file

Workflow

- Fully integrates into workflows (Enfocus Switch® and Puzzleflow®)
- Command Line Interface for integration into any environment
- Embed processing information into XMP



About Elpical Software

Elpical Software, an international company with offices in The Netherlands and Germany, develops and markets software solutions for the production and enhancement of digital images and the automation of the image workflow. Based on extensive image analysis, the technology enables publishing houses to automate the enhancement of produced images. Elpical was established in 1997 by a management buy-out of the Electronic Imaging department of Victor Hasselblad AB. Since then, Elpical has become a leading specialist in the field of digital image enhancement and management.

The manufacturer's key products include Claro Single, Claro Premedia Server, 4LeafClover and EmailManager. Elpical's core competence in the field of digital images makes the company an ideal partner for other software suppliers who want to combine Elpical products with their own applications, or for system integrators who want to integrate expanded image functions in their own products. Elpical has concluded an OEM agreement with, among others, Océ® for the enhancement of embedded images from PDF documents.

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