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ct Digital Photography

DVD
Special Editions
StudioLine Photo Classic
PhotoAcute Studio

Video Tutorial
Adobe PS Elements 9

eBook
The Glossary of
Digital Photography

Photo Tools

Geotagging Your Photos

GPS cameras, accessories, software

Better Images with Optical Filters

Pro Lighting Effects The best studio setups

Mid-range Rivals Camera Test Canon, Nikon, Olympus, Sony

Extreme Subjects Bursting bubbles, Space Station

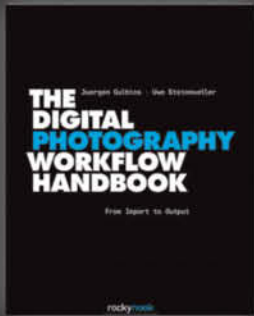
Photoshop Elements 9 Should you update? With video tutorial

Noise-free in Low Light Image stacking tricks explained

Travel Photography

Getting the most from your trip
Equipment and shooting tips





Juergen Gulbins · Uwe Steinmueller

The Digital Photography Workflow Handbook

From Import to Output

November 2010, 544 pages
978-1-933952-71-0, 8 x 10 Hardcover
US \$ 49.95, CAN \$ 62.95



NK Guy

Mastering Canon EOS Flash Photography

March 2010, 432 pages
978-1-933952-44-4, 8 x 10 Softcover
US \$ 44.95, CAN \$ 53.95



Mike Hagen

The Nikon Creative Lighting System

Using the SB-600, SB-800, SB-900, and R1C1 Flashes

February 2009, 272 pages
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From Photographers for Photographers

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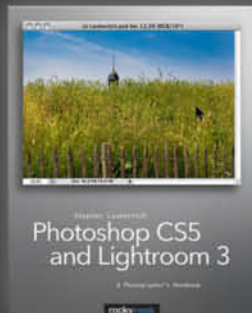
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Helmut Kraus · Uwe Steinmueller

Mastering HD Video with Your DSLR

March 2010, 240 pages
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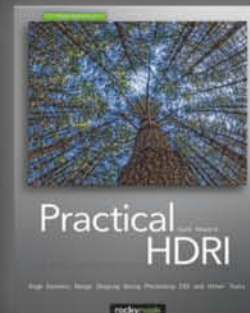


Stephen Laskevitch

Photoshop CS5 and Lightroom 3

A Photographer's Handbook

July 2010, 289 pages
978-1-933952-67-3, 8 x 10 Softcover
US \$ 39.95, CAN \$ 49.95

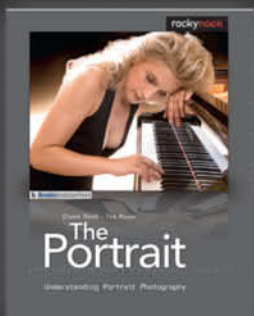


Jack Howard

Practical HDR, 2nd Edition

High Dynamic Range Imaging Using Photoshop CS5 and Other Tools

August 2010, 240 pages
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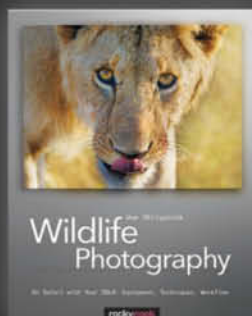


Glenn Rand · Tim Meyer

The Portrait

Understanding Portrait Photography

December 2009, 200 pages
978-1-933952-46-8, 8 x 10 Softcover
US \$ 34.95, CAN \$ 41.95



Uwe Skrzypczak

Wildlife Photography

On Safari with Your DSLR: Equipment, Techniques, Workflow

June 2010, 236 pages
978-1-933952-56-7, 8 x 10 Softcover
US \$ 39.95, CAN \$ 49.95



Cyrill Harnischmacher, Editor

The Wild Side of Photography

Unconventional and Creative Techniques for the Courageous Photographer

July 2010, 224 pages
978-1-933952-51-2, 10 x 8 Softcover
US \$ 29.95, CAN \$ 37.95

The sky's the limit!

Digital photography is here to stay and enriches our lives almost daily in new and fantastic ways.

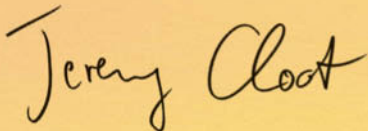
This issue of c't Digital Photography takes you all the way from the microcosmos contained in a single exploding soap bubble to the International Space Station – mankind's first foothold on the way to the stars.

Back on Earth, our piece on travel photography will help you get the most out of the photos you take on the road, while our in-depth look at GPS and geotagging gives you the low-down on pinpointing image locations and using geodata to catalog your work and discover more about the places you visit.

For the purists out there, we show you how to use accessory filters to fine-tune the look of your photos, and our lighting feature gives you a close-up view of the techniques used by pro studio photographers to capture perfect portraits.

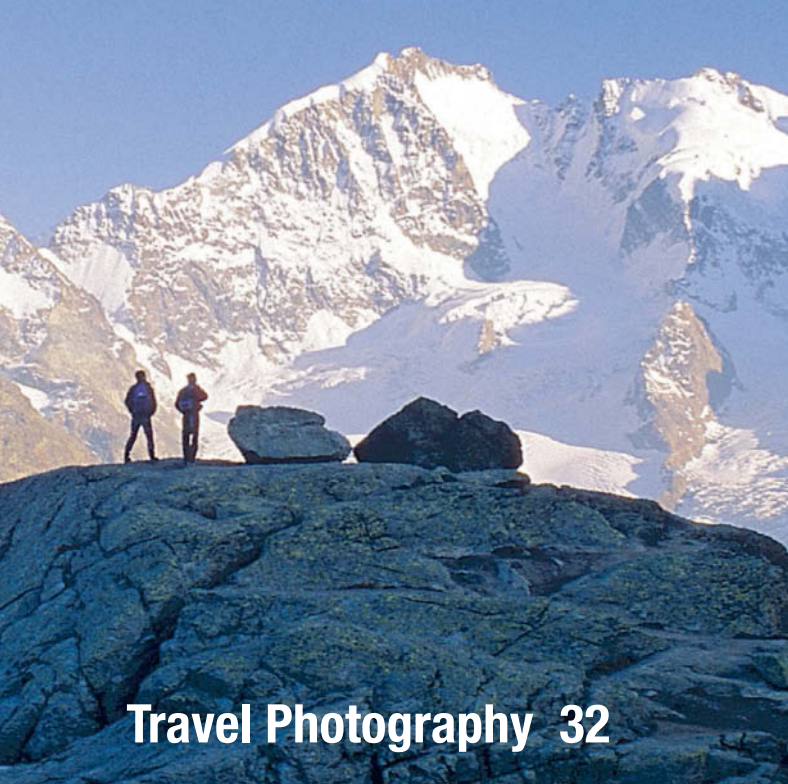
If all this gets you itching to get out and start shooting, our camera test gives you all the information you need to choose the right camera from the latest models to hit the market and – last but by no means least – this issue's portfolio by Lukas Roth straddles the fine line between fact and fantasy, with subtly tweaked images that leave you wondering if things are perhaps not quite what they seem.

Happy imaging and until next time ...



Jeremy Clout





Travel Photography 32



Geotagging Your Photos 50

Portfolio

Lukas Roth creates new worlds from hundreds of original photos. His images show people and places that appear to exist but which are, in reality, a subtle and compelling product of the photographer's imagination.

8 Lukas Roth Portfolio

Pro Lighting Effects

Art director and photographer Thomas Saur uses detailed descriptions and a wealth of real-world examples to demonstrate how different lighting techniques and compositional rules influence the look of a studio portrait.

16 Studio Lighting Tips

Travel Photography

Refining your travel photography technique produces better results and helps you to get more from your trip. Pro reportage and travel photographer Reinhard Eisele explains what equipment to use and how to capture fantastic images of people and places wherever you go.

- 32 Equipment
- 39 Cities, Buildings and Interiors
- 42 Landscapes
- 44 People
- 47 Composition

Geotagging Your Photos

GPS-capable cameras, smartphones and tracking devices record precise geographic coordinates with your image data. Image management software and Web portals are now using geodata to create intricate maps and huge databases of location-based information, rapidly turning geotags into universal image management tags.

- 50 Overview
- 53 GPS Cameras and Smartphones
- 55 Accessory GPS Receivers
- 58 Loggers
- 59 Displaying and Organizing Geotagged Images

Camera Test

We test four new prosumer DSLRs and stack them up against the Olympus PEN E-PL1 and Sony's innovative Alpha 55. All you need to know about the latest models.

64 Interchangeable-lens Camera Test

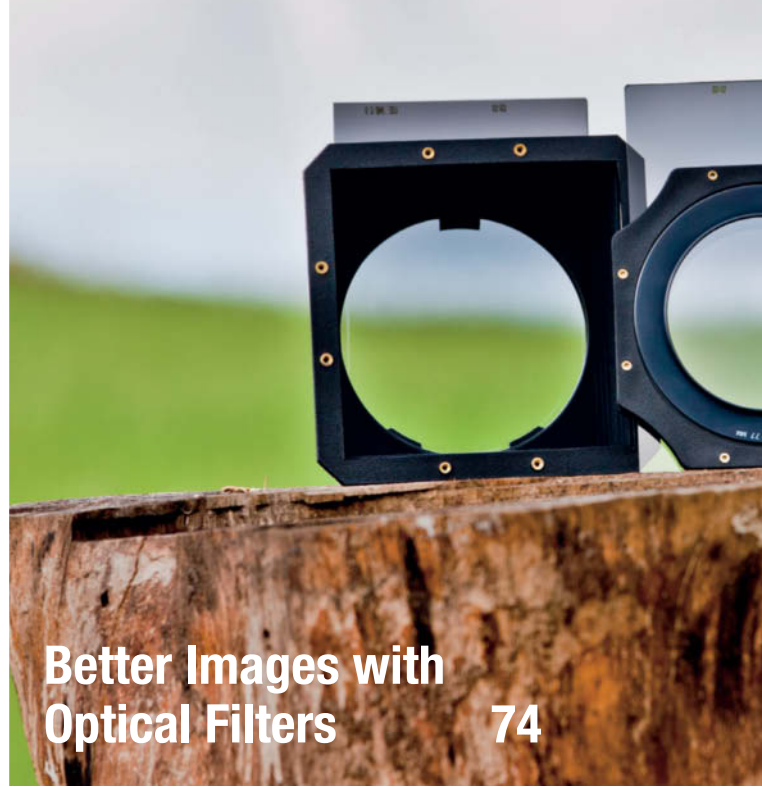
Optical Filters

Why attach a filter to your lens when your image processing program is chock full of digital filters and adjustments? The answer is because some filter effects simply cannot be reproduced digitally. Workshop and buying guide.

74 Creating Special Effects using Optical Filters



Camera Test: Mid-range Rivals 64



Better Images with Optical Filters 74

Image Stacking

Simple idea, fantastic images: If your camera can't capture all the data you need to get the effect you want, why not take several different photos of the same subject and merge them into a single super-image? The results are amazing: less noise, more dynamic range and images that look just like the scene you remember.

98 Image Stacking Tricks and Techniques

Elements 9: Should You Update?

The latest release of Adobe's image processing and media management software for advanced amateur and semi-pro photographers once again raises the bar in this segment. We give you the low-down on what's better and where Adobe still has room to improve.

114 Photoshop Elements 9

Digital Terminology Explained

A lot has happened in the world of photography since its invention and the pace of change introduced with digital technology has given rise to a whole new language. This article explains the most important digital photographic terms.

118 A Glossary of Digital Photography

Extreme Subjects

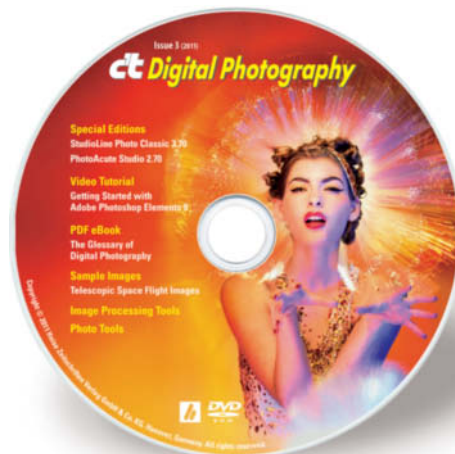
Are you on the lookout for new subjects? We have found two that are worlds apart, but which share the fact that they cannot be seen with the naked eye alone.

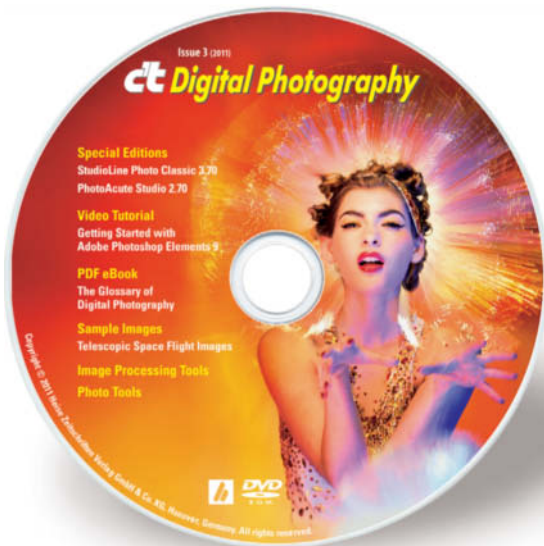
92 Photographing the ISS
128 Bursting Bubbles

Free DVD

Alongside our selection of trial and special version software, this issue's free DVD includes a two-hour video tutorial on Adobe Photoshop Elements 9 and a PDF eBook that explains more than 1,500 of the latest digital photographic concepts and buzzwords. We have also included additional images from space to go with this issue's article on photographing the ISS.

6 DVD Contents
7 DVD Highlights





eBook

The Glossary of Digital Photography

Video Tutorial

Getting Started with
Adobe Photoshop Elements 9

Full Version Software

PhotoAcute Studio 2.70
Special Edition (Windows, Mac)
StudioLine Photo Classic 3.70.21.0
Special Edition (Windows)

Image Processing

Windows

Artweaver Free 1.2
Chromagic 1.0
Gimp 2.6.11
Gimp Portable 2.6.11
GREYC's Magic Image Converter (G'MIC) 1.4.5.2
Helicon Filter 4.93.2
HeliosPaint 1.4.4
ImageMagick 6.6.5-10
ImageMagick 64-bit 6.6.5-10
Liquid Rescale 0.7.1
Liquid Rescale Portable 0.7.1
Luminance HDR 2.0.1
Normalmap 1.2.2
Paint.NET 3.5.6
Plug-In Switch 1.3
PSPI 1.0.7
RegiStax 5.1.9.2
Separate+ 0.5.8
Wavelet decompose 0.1.2
Wavelet denoise 0.2

Mac

Gimp 2.6.11
GREYC's Magic Image Converter (G'MIC) 1.4.5.2
HeliosPaint 1.4.4
Luminance HDR 2.0.1

Linux

GREYC's Magic Image Converter (G'MIC) 1.4.5.2

Photo Tools

Windows

Enblend/Enfuse 4.0
EnfuseGUI 2.1.2
ExifTool 8.40
Foto-Mosaik-Edda 5.7.0
GeoSetter 3.3.60
Geotag 0.071
GPSBabel 1.4.2
Hugin 2010.2.0
Hugin 64-bit 2010.2.0
Image Composite Editor 1.3.5.0
Image Composite Editor 64-bit 1.3.5.0
JetPhoto Studio 4.9.5
Photomapper 0.7
TSR Watermark Image Software 1.9.5.1

Mac

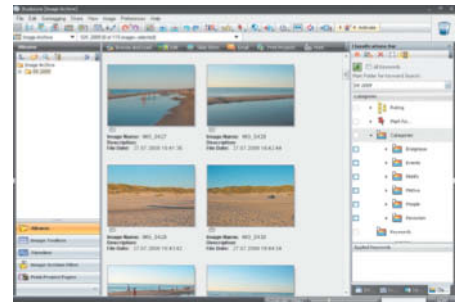
EnfuseGUI 2.1.2
ExifTool 8.40
Geotag 0.071
GPS-Info 2.0
GPSBabel 1.4.2
GPSPhotoLinker 1.6.4
HoudahGPS 4.1.1
Hugin 2010.2.0
JetPhoto Studio 4.9.5
Sofortbild 1.1.1b2

Linux

ExifTool 8.40
Geotag 0.071

Sample Images

Telescope Space Flight Images



StudioLine Photo Classic *Special Edition*

This special c't edition is a practical all-in-one photo processing tool with exclusive geotag support and a special full version discount for c't readers.

StudioLine Photo Classic unites image processing, storage, image management and presentation functionality in one easy-to-use interface with an introductory wizard to help you get up to speed. The program supports all common image formats and stores results in its own database. This exclusive c't edition of the program supports geotags, and uses the geo-data stored with your images to automatically identify the country, town and street name of each photo's location. You can use location data to sort, filter and search your images.

In order to activate the c't special edition, you require a key that you can obtain either via the link included on this issue's free DVD or directly via the program interface. You need to provide your first and last names and a valid e-mail address to get a key, which is valid until October 7th, 2011.

The c't special edition of the program also includes Timeline view and custom printing features, while the full version also includes additional Gaussian Blur, Unsharp Mask and Selective Soft Focus features. c't readers who upgrade to the StudioLine Classic Plus version using the program's update feature will receive a €19/US\$25 discount and access to additional Web gallery, custom layout and save to external media functionality. (keh)

DVD Highlights

The DVD's many highlights include special versions of *StudioLine Photo Classic* and *PhotoAcute Studio*, as well as a video tutorial on *Getting Started With Photoshop Elements 9* and the eBook *The Glossary of Digital Photography*



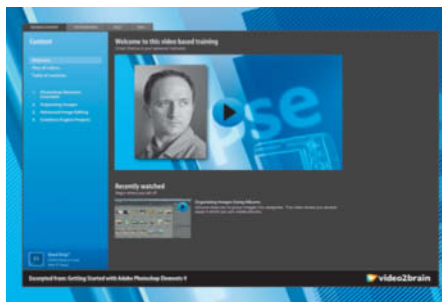
PhotoAcute Studio 2.70 Special Edition

PhotoAcute Studio is an easy-to-use tool for producing reduced-noise, ultra-high-resolution, or HDR images from sequences of source image files.

PhotoAcute uses the data stored in a sequence of source images to produce a single reduced-noise or ultra-high-resolution image. The program has a user-friendly interface, reads RAW files, and is capable of saving to JPEG, 16-bit TIFF, PNG and DNG formats. It also includes functionality for removing unwanted moving objects, focus stacking (i.e., merging multiple images with differing focus settings to a single image with increased depth of field) and HDR image production.

PhotoAcute has its own image alignment feature, which is capable of saving aligned images individually for processing in other programs. Corrections to image geometry can be performed using user-selected camera/lens profiles. The number of lens profiles available varies from camera to camera. If your particular lens is not profiled, it is possible to use the profile from a lens similar to the one you are using, but the resulting lens correction and ultra-high-resolution stacking results will be less accurate. The program also includes a feature for removing color fringing.

The manufacturer is offering a 15 percent discount on all full version licenses for the latest version of the product purchased before June 1st 2011. A license includes updates for a full 12-month period. (R. Altmann/keh)



Getting Started With Photoshop Elements 9

This two-hour video tutorial introduces the basics of working with Photoshop Elements 9, as well as advanced techniques for experienced hobbyists.

Photoshop Elements 9 is the latest version of Adobe's image processing and media management package for advanced amateur users. Version 9 includes a number of important new features but remains simple and intuitive to use.

The tutorial is divided into four sections. Section 1 covers the basics of the program's interface, including the Welcome Screen, working with the Organize and Edit workspaces, image data backup, and an overview of the available tools and their uses. Section 2 addresses the program's media management functionality, and explains the principles of image organization using albums and keywords. Section 3 goes into detail on advanced image processing techniques, including the Layers functionality that is essential to many complex imaging projects, photo collage techniques, and the program's unique Photomerge tool. The five Photomerge sub-tools include the Exposure Guided Edit for merging multiple, differently-exposed images into a single, correctly exposed photo and the Scene Cleaner Guided Edit, which you can use to combine elements from several photos in a single image. The final workshop section explains how to create slideshows to showcase and share your images, and how to create greeting cards using the new skills you have acquired. (keh)



The Glossary of Digital Photography

This PDF glossary strives to help those involved in this cutting-edge industry to understand the constantly-evolving language that it generates.

One hundred and eighty years of photography, 20 years of Photoshop, 10 years of digital cameras – digital photography is a relatively new discipline that is still undergoing rapid change that, thanks to new developments in semiconductors, is unlikely to slow down any time soon. New cameras, accessories, techniques, and applications are constantly being introduced, making it necessary to create new words to describe them. The result is a complex web of interwoven technical and artistic terms that even some veteran photographers have trouble understanding.

This extensive PDF glossary is designed to help you keep pace with all the latest developments, and includes definitions of more than 1,500 digital photographic terms, plenty of illustrations, and a comprehensive set of cross-references.

The book has been extensively researched to include all terms in current use and to provide their most up-to-date meanings. It is designed to be equally useful to students, amateur or professional photographers, designers, image-makers and anyone who is involved in pre-press or publishing. The original print version of the book was published in 2007 by Rocky Nook, and the latest version can be found at: www.rockynook.com/books/22.html. (keh)

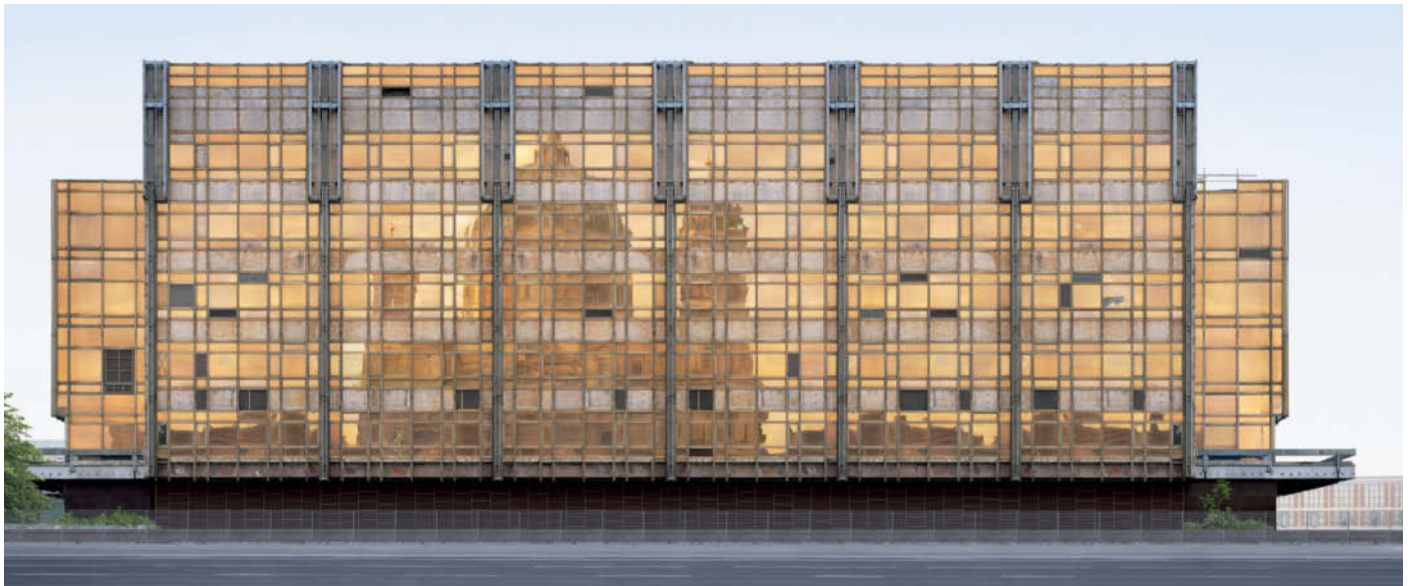


Portfolio

Lukas Roth



Aquarium (2007): The shark at the top appears to be swimming out of the top of the photo, creating a physical link with the viewer. The viewer becomes immersed in the image, making it impossible to view the aquarium from outside.



Palast (2003): The idea for this photo came up spontaneously during a trip to Berlin in which Lukas Roth photographed right through the night until dawn. The individual photographs were published in 1993, before there was any hint of plans to demolish the Palace of the Republic, a landmark of the former East Germany. It is not actually possible to capture the reflection of the Berlin Cathedral from this perspective.

Born in Regensburg, Germany, in 1965, Lukas Roth specialized in architectural photography at the École Nationale de la Photographie in Arles, France. After returning to his own country, he launched into self-employment as an architectural photographer in 1991 and, since then, contract work for architectural practices and other companies have formed the basis of his professional work. Since 2002, he has also been developing the artistic side of his photography. His aim is always to capture his personal impression of a place and its atmosphere rather than a strict photographic representation. The German Photographic Association (DGPh) Otto Steinert Prize in 2004 and numerous exhibitions prove that the distinctive aesthetics of his art strike a chord with viewers. In 2008, he was inducted into the Deutsche Fotografische Akademie (DfA) and the German Photographic Association. Roth lives and works in Cologne.

The Photographic Art of Lukas Roth

Viewers recognize the view from the Pont du Gard or the shot of the Palace of the Republic immediately. The photos seem to match their

memories, but gradually people become aware that something is not quite right. Is it really possible to see the Berlin Cathedral reflected in the windows of the Palace? No!

Not a single one of the buildings and landscapes shown here can be photographed as they appear in Roth's images, which he compiles from numerous source photos on his computer. The key to his art is the conviction that the optical impression of a place comprises many images: walking through a building, we experience the space in three dimensions, from many vantage points and from different positions. In his images, Roth works backward from these memories to interpret the location or building.

Using a large format analog camera, he takes thousands of photos of the subject from different points of view, then selects several hundred to work on in *Photoshop*. The result is massive files that can be as large as 40 GB. It takes three months to craft one of these exceptionally detailed works. He creates the images and sets up the merging process himself, and an assistant helps him with the actual image processing.

Lukas Roth's art inhabits the space between photography and perception or memory. He interprets places for us instead of just

showing them to us. Something new and illusory is created that corresponds to his personal impression of the place or building. It is neither a photograph nor a likeness – even when merely trying to categorize these works, we find ourselves testing new boundaries. (jr)

Pont du Gard (2005): Lukas Roth knows this spot on the Pont du Gard well thanks to his years at university in Arles. In fact, there is no way to get a good shot from this perspective. By combining many individual shots into a single artificial image, he shows us a view from the bridge that would simply not be visible if we went there ourselves.





Bibliothek (2005): This library at a law firm in Cologne is visible to passers-by. Roth chose a slightly modified Frankfurt skyline as the basis for the look of his image. There is something strange about the lighting, and the shadows under the bookshelves don't quite match with the light produced by the ceiling lamps.

Gletscher I (2008): Three trips to the Rhône Glacier in Switzerland, at different times of the year, were required to obtain sufficient source material for this image. The layered landscape is disconcerting because areas that are further away look much larger than they are in reality.



This dead forest is cut off, stranded in the middle of a motorway interchange. The cut timber cannot be carted away but is simply left to rot. Unusually for Roth, this image was created using just three source photos.



