A Guide to Staying Ahead of the Workflow Curve Photography Best Practices and Workflow Handbook

A Guide to Digital Staying Ahead of the Workflow Curve Photography Best Practices and Workflow Handbook

Patricia Russotti **Richard Anderson**



AMSTERDAM • BOSTON • HEIDELBERG LONDON NEW YORK • OXFORD • PARIS • SAN DIEGO SAN FRANCISCO • SINGAPORE • SYDNEY • TOKYO



Focal Press is an imprint of Elsevier

Focal Press is an imprint of Elsevier 30 Corporate Drive, Suite 400, Burlington, MA 01803, USA Linacre House, Jordan Hill, Oxford OX2 8DP, UK

© 2010 Patricia Russotti and Richard Anderson. Published by ELSEVIER Inc. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher. Details on how to seek permission, further information about the Publisher's permissions policies and our arrangements with organizations such as the Copyright Clearance Center and the Copyright Licensing Agency, can be found at our website: www.elsevier.com/ permissions.

This book and the individual contributions contained in it are protected under copyright by the Publisher (other than as may be noted herein).

Notices

Knowledge and best practice in this field are constantly changing. As new research and experience broaden our understanding, changes in research methods, professional practices, or medical treatment may become necessary.

Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information, methods, compounds, or experiments described herein. In using such information or methods they should be mindful of their own safety and the safety of others, including parties for whom they have a professional responsibility.

To the fullest extent of the law, neither the Publisher nor the authors, contributors, or editors, assume any liability for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein.

Library of Congress Cataloging-in-Publication Data Russotti, Patti.

Digital photography best practices and workflow handbook : a guide to staying ahead of the workflow curve / Patricia Russotti, Richard Anderson.

p. cm. Includes index. ISBN 978-0-240-81095-9 1. Photography–Digital techniques. 2. Project management. 3. Workflow. I. Anderson, Richard, 1949- II. Title. TR267.R87 2010 775–dc22

2009030652

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

ISBN: 978-0-240-81095-9

For information on all Focal Press publications visit our website at www.elsevierdirect.com

09 10 11 12 13 5 4 3 2 1

Printed in the United States of America

 Working together to grow

 libraries in developing countries

 www.elsevier.com
 www.bookaid.org

 ELSEVIER
 BOOK AID International

 Sabre Foundation

Contents

ACKNOWLEDGMENTS		ix
INTRODUCT By Therese M Administrativ Photographic Director, SPA School of Pho Rochester Ins	FION Iulligan re Chair, Arts S Gallery otographic Arts and Sciences (SPAS) stitute of Technology	xiii
Chapter 1	Digital Photography Best Practices and Workflow	1
	Who	2
	The Accumulation Effect	2
	The DPBestflow and UPDIG Connection	4
Chapter 2	Terminology and the Importance of Language	7
	DPBestflow Glossary	8
Chapter 3	An Overview of Workflow Components and Planning	29
	The Basic Concepts of Digital Photography Workflow	29
	Planning (Decisions and the Work to Be Done Prior to Starting a Project)	33
	Knowledge Bases	35
Chapter 4	Workflows and Parameters	39
	The Workflows	40

	Quality	43
	Workflow Parameter Decision Points	44
	Capture Formats	46
	Workflow Software Options	50
	Batch or Optimized Workflow	54
	Rendered or Unrendered Workflow	55
	The Working File Life Cycle	56
	Working File's Life Cycle Order Based on Software Application Type	59
	DPBestflow Workstation Setup	60
Chapter 5	The Image Archive	67
	Archive vs. Backup	67
	Data Integrity and File Transfer	70
	Archiving Goals	72
	Keeping Track of Camera Originals, Copies, and Derivatives	73
	Searching the Archive	76
	Retrieving Image Files from the Archive	77
	Migrating the Archive	81
	Data Verification	83
	Archive Hardware	89
	The Image Bank as a Working Archive	94
Chapter 6	Image Capture	97
	Shoot Parameters	97

Capture Format	101
Matching Camera Technology to Workflow Needs	108

vi

Chapter 7	Getting to Work—Image Ingestion	123
	Data Preservation and Data Backup	123
	DPBestflow File-Naming Conventions	124
	Add Metadata	125
	Ingestion Tools	127
	Ingestion Setup	132
	Comparison Chart of Ingestion Software	140
	Handling Your Capture Format Choice	141
Chapter 8	Image Edit	143
	Editing Checklist	144
	Editing Best Practices	144
	Edit Software Options	145
Chapter 9	Optimization	151
	Matching the Scene	152
	Maximizing Image Quality	156
	Preserving Your Work	157
	Optimization Tools	157
	Color Management	161
Chapter 10	Master Files and Derivative Files	169
	Tool Options	170
	DNG Workflow Primer	174
	Points of Conversion	175
	Where Is My PIE Stuff (Parametric Image Edits that I Made)?	181

CONTENTS

Chapter 11	Image Proofing	183
	Proof Types that We Are Familiar With	183
	Image Life Cycle Review	184
	Why Proof?	187
	Best Practices	188
	Proofing Tools	189
Chapter 12	Image Delivery	193
	Delivery Types	193
	Rendered Files: Repro-Ready RGB or CMYK Image Files	195
	Preparing Image Files for the Web	196
	Saving Files for Screen Use	198
	Preparing RGB Files for Digital Printing	201
	CMYK Guideprints	206
	Repro-Ready, but Unsized, RGB or CMYK Image Files with	
	No Output Sharpening	207
	Rendered Delivery File Formats	209
	Unrendered Files	210
	Delivery Media	211
	Delivery Paperwork: The Read Me File	213
lt's a Wrap		219
The Importance of Ergonomics		221
Index		233

Please visit dpBestflow.org for updated information, the latest advances in workflow, and QuickTime movie tutorials

Acknowledgements

FROM PATRICIA RUSSOTTI:

This project first began three years ago during a discussion at an SPE conference in Miami with Diane Heppner, then Acquisitions Editor for Focal Press. I would like to extend my thanks to Diane for being supportive of this project from the very beginning.

Since that time, it has been my great pleasure to work with Cara Anderson, Senior Acquisitions Editor and Danielle Monroe, Associate Acquisitions Editor at Focal. Two of the most patient, encouraging professionals – what a great team! One could not ask for a better group to work with. I also know there are many behind the scenes people that make these productions possible – many thanks to all of you.

I want to acknowledge the people who introduced me to imaging at large and gave me strategies to view complex systems, break them down, make them understandable, and still be able to maintain currency. I need to start with Dr. Gerald LaMarsh, a Professor at Monroe Community College who led me to his former teachers, Dr. Warren Stevens and Dr. Denny Pett, both Professors at Indiana University. They taught me that a life in academia is about staying open-minded and looking for new ways to understand what you think you already know. During that time I was also fortunate to study with Henry Holmes Smith, a gifted artist and educator, who always offered an alternative way of looking at and seeing things. These wonderful teachers provided my foundation for a career in imaging and education. And of course, I am always grateful for the

opportunities that have been provided to me and for the students I have taught during my career at the Rochester Institute of Technology.

I would like to thank my co-author Richard Anderson for his determination to spread "the word" and for sharing his knowledge. There are always many people to acknowledge when a project is completed. Richard mentions many of them in his acknowledgments and I add my thanks to each of them as well.

A very special thanks to Dr. Therese Mulligan, Administrative Chair, Photographic Arts School of Photographic Arts and Sciences at RIT for her ongoing support and for writing the introduction to this book.

Many thanks to the following industry luminaries for providing inspiration, tools, and endless information: Bruce Fraser, Jeff Schewe, John Paul Caponigro, and Julieanne Kost.

Greg Barnett, my buddy, partner, digi guru, and the voice of reason, this book would not have been completed without your endless support, humor, and help. I thank you from the bottom of my heart.

I am also blessed with a circle of friends who are always there to listen, diffuse, and support – you know who you are, I love you each for giving such gifts.

My father, Louis James Russotti, gave me the gift of looking at the world and the interest to render it from my heart. And Blaise Raphael Russotti, my son, who has been so patient and teaches me something new every single day – this is for you.



Blaise Raphael Russotti

FROM RICHARD ANDERSON:

The U.S. Library of Congress has provided funding and support for much of the research that went into this book, the supporting website dpBestflow.org, and the seminars that follow through the National Digital Information Infrastructure Preservation Program (NDIIPP). This important program aims to preserve digital content, which is fast becoming the primary source data for our entire culture. Our part in it is to help image creators to think about their work in terms of preserving it for future generations, which is no easy task.

I'd like to thank Martha Anderson, Caroline Arms, Phil Michel, and Carl Fleischhauer for their vision and support throughout this project. The American Society of Media Photographers (ASMP) provided the structure for the larger project making this book possible. ASMP has provided unstinting support to me through the creation and support of UPDIG and now dpBestflow. I would like to particularly thank Susan Carr, Eugene Mopsik, Peter Dyson, Vic Perlman, Chris Chandler, and Elena Goertz for standing behind me through thick and thin. The ASMP Board of Directors has always supported my vision for this project and I humbly thank them.

This book would not have been possible without the efforts of my co-author, Patricia Russotti, a long time professor at Rochester Institute of Technology. Patti knows workflow, and more importantly, she knows how to teach it. Patti also introduced me to other members of the RIT community who contributed important elements such as the glossary (Greg Barnett) and camera testing (Mike Dear and Natalie Russo).

I can't imagine a better publisher than Focal Press, especially the team of Cara Anderson and Danielle Monroe. Their constant encouragement and guidance made this book possible. I'd like to also thank Harold Naideau and Jay Pastelak for their early reviews of the manuscript, which gave us valuable insight and helped us improve the book.

I have benefited from the advice and counsel of many members of the digital intelligentsia. Judy Herrmann and Mike Starck stand out as early adopters who opened my eyes to the possibilities of digital photography. Peter Krogh has patiently explained much of what happens "under the hood" and I am proud to be associated with him as part of the project team. Michael Stewart was the man behind the curtain during the UPDIG days and I always seek his advice on the really difficult questions. For color management understanding, I always seek out Kevin DePalmer of GammaGraphix; he knows it like the back of his hand.

Our project has had important industry support, notably from: Adobe (Kevin Conner, John Nack, Eric Chan, Jeff Tranberry, and Peter Constable), Microsoft (Josh Weisburg), Bibble (Eric Hyman), Camera Bits (Dennis Walker and Kirk Baker), and Canon (Chuck Westfall).

Certain Web sites have proven invaluable for insight and understanding. They are too numerous to mention but the standouts are Luminous-Landscape.com, Robgalbraith.com, John Nack's blog, Cambridgeincolor. com, and dpreview.com

Very little of this book or this project would have been possible without the participation of my associate Dan Stack. Dan is responsible for many of the photos and illustrations contained in the book and he did most of the software and hardware wrangling in our quest to understand how things really work.

I'd like to dedicate this book to the memory of Bruce Fraser. I learned more about digital imaging and workflow from his books than from any other single source.

And finally, I'd like to thank my Valerie, my wife, and Nicholas, our son, for their support and understanding as I put in many extra hours beyond a normal commitment to work for the past few years. I still look forward to evening breaks in my work to read books with Nicholas at bedtime. We're now working our way through the Harry Potter books.



© Patricia Russotti

Introduction

"The only way to make sense out of change is to plunge into it, move with it, and join the dance."

—Alan Watts

"The illiterate of the future will be ignorant of the camera and pen alike."

> —László Moholy-Nagy, "From Pigment to Light," 1936

Publications such as the present volume on digital image workflow are outward recognition of the transformation underscoring our ever-embracing digital world. Once used to describe the rational organization of labor and processes of industrial manufacturing, in the 1980s the term *workflow* took on a contemporary definition related to emergent digital technologies, in particular software processing. It addressed interactions between humans and machines via the objects, networks, data, and images digital technologies produce. For image-makers, particularly those involved with the photographic image, "workflow" constitutes a new technical ordering of the visual image—an ordering tied to the world-view transformation of visual culture.

As this book suggests, the burgeoning practice of digital imaging prompts a reorientation of visual

literacy based on the intertwining engagement of the digital and the photographic. The digital mediates the photographic by absorbing, challenging, and reshaping its appearance, use, distribution, and meaning in visual culture. This mediation is not new. It is the expected result when new technologies impact older, existing ones. More than 160 years ago, photography itself proved a mediating agent on painting, and, in its turn, photography was mediated by film. Today, digital imaging technologies are compellingly persuasive and pervasive, subsuming both the still and moving image (film and television) in innovative mediating spaces, including software programs, the World Wide Web, and virtual reality, and affecting societal sites from the domestic and civic arenas to leisure and entertainment. From this perspective, then, the pedagogical objective of visual literacy in the digital realm is newly constructed by mining photography's mediating past, while simultaneously addressing its own mediation by the digital, negotiated in older (print) and newer (virtual) forms of display and user/viewer interaction.

To examine the dynamic interplay of new and older image technologies within social sites, one needs to look no further than the social utility, Facebook. With more than 200 million users worldwide, Facebook casts a wide local and global net over personal and public information, transforming the domestic sphere of familial customs and the civic areas of government, school, the workplace, and the marketplace. For example, family snapshots once fixed on the supportive matrix of paper and album page are now carried on digital media, enabling outspread access and dissemination via computer or mobile upload to a Facebook user's homepage, social networks, or as a "tagged" hyperlink to depicted user "friends." With the ability to transfer an unlimited amount of image files, users have popularized Facebook's "Photos" application, with its album, face recognition, and tagging features, as the new depository of personal and family memories. Thus both the use and materiality of the domestic family picture have changed, although its photographic underpinning and appearance are largely unaffected. Consequently, the domestic image, along with its associated personal informational data, once relegated to the hermetic world of shoeboxes and album pages, is now on virtual public display, subject to the acquisition, management, and control of other users, as well as the marketplace. In the evolving realm of digital technologies, and as Facebook illustrates, the personal elides with the public, and the digital image, with its invisible trace of metadata, prompts a new awareness of personal responsibility toward the treatment of the digital image.

Like the printing press and the handheld snapshot camera, today's digital technologies comprise a further democratization of the image due to immediacy and global exchange at an economical cost, with immeasurable creative, interactive options. But with greater democratization and greater proliferation of the digital image comes a heightened responsibility for its care and preservation by maker and user alike. In contrast to its analog predecessor of film and paper, the digital image brings a wholly new administrative and technical workflow or constitution of capture, management,

reproduction, and dissemination. Central to all of these component parts is a digital file's metadata, which provides the traceable link between original image capture, processing, use, and subsequent migration and archival preservation. Long present in all image technologies, including analog photography, metadata in the digital realm offers innovative advantages with its ability to embed information and/or link information to single or collective image files. An experienced understanding of metadata, along with digital workflow, is of critical consequence to all makers and users of digital imagery, no matter their creative pursuits. Simply put, it establishes a skilled, learned pattern for the care and management of images, providing accessibility and, in turn, preserving much of their meaningful connections to contemporary visual culture and its evolving history.

While this publication takes up pedagogical strategies of instruction and knowledge pertaining to the digital image, it also emphasizes the contributions of the image-maker in shaping and defining aesthetic, informational, and cultural visual display. Technical processes, here defined as explainable steps and repeatable workflow, belie the explicit craft involved in digital imaging with the possibilities of creative expression. For the image-maker, this is the larger charge when learning and working with new image technologies as it was with older technologies, such as photography. Craftsmanship-the acquisition of skills by training, as this book proposes-posits personal responsibility for the digital image as grounded in experience and expertise. This approach is of utmost importance as student and professional image-makers navigate a digital landscape replete with the "new"-hybrid methods that intertwine the still and moving image in a hypermedia of connectivity and display. The call for visual literacy and

technical acknowledgment of the "new" is very much a vital component for understanding the "now" of our post-photographic era. As the still image continues to sustain its material presence on paper support, and virtual or immaterial creative expression gains in currency, craft must combine with renewed understanding and vision to celebrate, challenge, and refashion convergent aesthetic and cultural uses of the digital image. In this way, practitioners, along with users/viewers, will advance creative invention and the future prospects of our evolving imageoriented world. Therese Mulligan Ph.D. Administrative Chair, Photographic Arts Director, SPAS Gallery School of Photographic Arts and Sciences (SPAS) Rochester Institute of Technology

Prior to her arrival at RIT in 2003, Therese Mulligan served as the curator of photography at George Eastman House, International Museum of Photography and Film, where she organized numerous exhibitions, as well as authored and edited articles and publications on historical and contemporary photography.