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# REPORTER

"THE WINDOW ON IMAGING"

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## SELECTIONS FROM CONFERENCE ABSTRACTS: ARCHIVING 2007\*

### Page Image Compression for Mass Digitization

Stephen Abrams, Stephen Chapman, Harvard University Library (USA); Catherine Lupovici, Laurent Duplouy, Bibliothèque nationale de France, (France); Ann Jensen, John Kunze, California Digital Library (USA); Stuart Blair, Internet Archive (USA); Dan Johnston, University of California at Berkeley, (USA)

**Abstract:** A number of the world's major libraries are embarking on large-scale projects to digitize books, journals, newspapers, and other printed materials. The main purpose of these mass digitization initiatives is to make published content visible to text indexing engines and accessible online for viewing and printing. The projects also present significant archiving challenges: capabilities must be developed within libraries to manage the hundreds of millions of files comprising their master volumes.

Even with the cheap disks and fast networks available today, projects of this scale must implement space-efficient imaging strategies to minimize long-term storage costs and maximize efficiencies for processing tasks such as file transfer, dynamic generation of deliverables, and migration. Libraries have had to accept that page image masters must be compressed, and that lossless compression of grayscale and color data will not achieve the efficiencies they are seeking in mass digitization.

In this paper, we present findings from studies coordinated by the California Digital Library, the Inter-

net Archive, the Harvard University Library, and the Bibliothèque nationale de France to evaluate relationships between file size and perceived image quality for lossy compressed JPEG 2000 (JP2) images. We employed similar, but not identical, methods to create small test suites of source page images, which were then processed by four command-line JP2 codecs to produce images that observers rated from "perfect" to "unacceptable."

We present viable technical profiles for lossy JP2 encoding of page image masters, with recommended settings for selected command-line codecs. We are maintaining test suites of digitized book pages and invite others to use them to extend efforts to develop robust image processing algorithms that balance quality and file size in a variety of page image products.

To view the full article go to [www.imaging.org/pubs/reporter/](http://www.imaging.org/pubs/reporter/)

### Format Identification, Validation, Characterization and Transformation in DAITSS

Carol C.H. Chou: Florida Center for Library Automation; (USA)

**Abstract:** Rapid technology advancement and obsolescence present a constant challenge for preserving digital objects in a digital repository system. To ensure the long-term preservation of archival content, DAITSS, a digital repository system developed for the Florida Digital Archive, implements a scheme to automatically identify, validate, characterize and transform the format of digital objects in its repository. This scheme purposes to fulfill the unique requirements of the Florida Digital Archive.

To view the full article go to [www.imaging.org/pubs/reporter/](http://www.imaging.org/pubs/reporter/)

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\* The full papers were presented at the Archiving 2007 Conference held in Arlington, Virginia, May 21-24, 2007.

# Archiving 2007: Learning How to Care for Collections, From Theory to Practice

by Scott Stovall, Government Printing Office and Archiving 2007 General Chair

From the opening keynote by Daniel Rosen of Warner Brothers to the Behind-the-Scenes tours on the last day, IS&T's Archiving 2007 conference was a success.

Building on previous years, Archiving 2007 emphasized digital technology for archiving with a blend of presentations on image science, preservation, access, metadata, and collection management. A single track conference, the meeting was divided into three technology areas: Archiving and Technology; Digital Preservation; and Creating and Managing Collections.

"Archiving and Technology" highlighted technical issues within archiving. While many of the papers focused on image quality and digitization, formats, and related issues, authors also presented papers on tools to assist repositories with packaging, search, and storage. One of the most provocative notions from this session was that digitization can be considered the manufacturing of images rather than just simply the scanning of them.

"Digital Preservation" can arguably be called the heart of Archiving 2007. From metadata to frameworks for trust and au-



Attendees listen to Jim Reilly's address (see below) during the technical session on Wednesday afternoon.



Osmo Palonen discusses his paper, "Normalized Database Preserves Radio Programme Information for Internal Users and Research," during the Interactive session on Wednesday.

thenticity, papers in this session showcased building blocks for creating a digital preservation repository.

"Creating and Managing Collections," which consisted of a mix of practical (real world) and strategic (future) approaches to digital collections, provided thought-provoking ideas.

The Archiving conference maintains a diverse and passionate community of interest, with more than 200 attendees from 10 countries, and 30 oral and 12 interactive papers given, along with keynote and focal speakers who engaged and inspired. A relatively new conference, Archiving strives to serve both the technical and non-technical communities. This year's success is due in great part to the efforts of the program committee, the speakers, the exhibitors, and—most importantly—the attendees.

Please join us in 2008 in Bern, Switzerland for the 5th Archiving conference. ▲

## The Impermanence of Permanence

delivered by James M. Reilly, director, Image Permanence Institute, Rochester Institute of Technology, at Archiving 2007 upon receipt of the HP Image Permanence Award

I want to share with you some reflections after more than 25 years of work in the image permanence field. My talk is titled "The Impermanence of Permanence" and my thesis is that concern for the longevity of images and information waxes and wanes in interesting and sometimes unpredictable ways. Nevertheless, it is possible to make some generalizations that may be useful.

If you Google the word "Permanence" the first listed item is about "Object Permanence," which is a concept in child develop-

ment first described by the Swiss child psychologist Jean Piaget that occurs at about 9 months of age when infants show awareness that objects persist when they are removed from immediate sight. It's approximately the point when "peek-a-boo" loses its fascination. I was reminded of this definition of permanence during the keynote speech for this conference by Dan Rosen of Warner Brothers, who made a similar point by showing a picture of magnetic tape and observed that because we humans see no image there the urgency for taking action to preserve it is reduced.

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# IS&T President's Annual Report

July 1, 2006 to June 30, 2007

I am pleased to present the Annual Report of the Society for Imaging Science and Technology. As you will see, the Society is thriving despite dramatic changes during the last few years in the dominant technologies of imaging. Much of our success can be attributed to the fact that IS&T continues to focus on helping members and others communicate with colleagues and remain up-to-date in this rapidly changing field.

The work of the Society is done by two groups: paid staff and volunteers. The staff is very ably led by Executive Director Suzanne Grinnan, who continues to improve the operations of our office and conferences. Suzanne has refined the organization of our finances and done very well at managing costs, meaning the Society has a good financial cushion from which to pursue new programs and expand on current offerings. She and the staff provide the infrastructure that makes IS&T work.

The value of volunteers, however, cannot be overlooked: Volunteers are critical to our success in the areas of conferences and publications—two leading sources of revenue—as well as to our leadership and recognition programs.

As many of you know, the technical organization of conferences is entirely dependent on the contributions of time, energy, and knowledge made by members of our Conference Committees—from General Chairs who lead the overall technical focus of a meeting to program committee members who review countless papers and act as Session Chairs.

In terms of publications, we are fortunate to have Mel Sahyun and Jan Allebach leading JIST and JEI, respectively. They represent only the pinnacle of the infrastructure of Associate Editors and Reviewers who allow us to publish these two well-respected journals. (Their reports on the state of the journals can be found within this annual report.)

And there are others. The Board of Directors, chapter councils, and special committee members all serve in a volunteer capacity. To each of them, we are much indebted. On behalf of the membership, I would like to thank each and every one of you who has given your time and expertise to the Society. I urge all of you to consider joining them. It's fun, really!

Having completed the second year of

my term as President of your Society, I am pleased to hand my symbolic gavel to Eric Hanson, who will lead IS&T through June 30, 2009. What follows is my final report as President, a summary of the Society's activities for 2006.

## Board of Directors

The IS&T Board of Directors meets three times a year. In the broad view, we spend most of our time focused on three topics: serving the membership, adapting the Society to the changes in imaging technology, and dealing with the rapidly changing landscape of scholarly communication.

One ongoing Board activity is the creation of new conferences. In some cases, members come to us with a proposal for a new conference. A good example is our first International Symposium on Technologies for Digital Fulfillment (TDF), which we held in conjunction with PMA this March. The papers were excellent, even if attendance was smaller than hoped. In other cases, a new topic crystallizes out of an existing conference, as with Digital Fabrication. Finally, we sometimes identify a gap in the "technical meeting

## IS&T BOARD OF DIRECTORS

### 2006-2007

**President:** James R. Milch, Eastman Kodak Co. / Carestream Health Inc.  
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### 2007-2008

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**IS&T Executive Director:** Suzanne E. Grinnan  
**Chapter Directors**  
**Europe:** Patrick Herzog, OneVision SW Entw. GmbH & Co. KG  
**Japan:** Takashi Kitamura, Chiba University  
**Rochester:** Franziska Frey, Rochester Institute of Technology

universe” created by new technologies. The Archiving Conference started this way. While not every new conference is successful, we consider it our job to nurture and give them the best chance for long-term success.

A second topic that we address with regularly is [www.imaging.org](http://www.imaging.org), our website. We are aware that the site can be enhanced to be of more value and use to members and the larger imaging community. To that end, we’re taking the first steps to improve the “business functionality,” of the site so that registering for meetings, purchasing products, and renewing membership is as seamless and easy as possible. IS&T staff is working on these improvements now. A bigger step will be to

make it a more effective tool for disseminating information about imaging technology—beyond one-way transmission of technical papers. We may have missed Web 2.0; Web 3.0 will be here soon. My successors will have fun keeping up with the rapid changes in web technology and the staff welcome suggestions about ways to make the site more valuable for you.

### Honors and Awards

The Honors and Awards Committee selected 15 excellent imaging scientists, two important papers, and two worthy students for recognition this year. All have contributed substantially to the technology of imaging, the work of Society, and/or the communication of new technology to the

community. On behalf of the Board, I congratulate them and thank the Committee and subcommittees for their work in selecting this noted group. The incoming 2007 Honors and Awards Committee awaits your nominations for this year!

### Observations

A few months ago, the IS&T Rochester Chapter honored members of the national Board who live in Rochester and gave several of us the chance to address the Chapter. It was a wonderful evening, with many interesting presentations, as well as memories and anecdotes shared among those who attended, including Frank Drago, who has been an IS&T member for 47 years. Exercising a traditional prerogative

## IS&T 2006 Financial Statement

<b>Balance Sheets</b>		
Fiscal Years Ending December 31 --		
ASSET	2006	2005
<b>Current Assets</b>		
Checking and Petty Cash	\$ 509,778	\$ 224,997
Money Market / CD's	1,094,036	1,054,846
Regular Savings Accounts	0	0
Investments	524,035	472,001
Accounts Receivable	10,006	36,435
Book Inventories	44,597	20,523
Prepaid and deferred expense	<u>66,580</u>	<u>72,252</u>
Total Current Assets	\$2,249,032	\$1,881,054
<b>Property and Equipment</b>		
Land	\$29,000	\$29,000
Building and Improvements	156,291	156,291
Furniture and Equipment	<u>306,105</u>	<u>288,079</u>
Subtotal	491,396	473,370
Less Accumulated Depreciation	<u>-406,881</u>	<u>-377,515</u>
Total Fixed Assets	84,515	95,855
<b>Total Assets</b>	\$2,333,547	\$1,976,908
<b>LIABILITIES AND FUND BALANCES</b>		
<b>Current Liabilities</b>		
Accounts Payable	\$90,911	\$138,335
Accrued Expenses	80,269	13,040
Due to Chapters	4,876	4,772
Deferred Income, Dues		
Subscriptions, Meetings	<u>570,913</u>	<u>711,406</u>
<b>Total Liabilities</b>	746,969	867,553
<b>Net Assets</b>		
Unrestricted	\$1,528,660	\$1,051,488
Davis Scholarship Fund	57,917	57,868
<b>Total Liabilities and Net Assets</b>	\$2,333,546	\$1,976,908

<b>Statement of Income</b>		
Fiscal Years Ending December 31 --		
	2006	2005
<b>Income</b>		
Conferences	\$1,852,442	\$1,126,378
Publications	525,255	316,870
Membership	114,238	77,908
Other	55,854	38,936
<b>Total Income</b>	\$2,547,789	\$1,560,092
<b>Expense</b>		
Conference	\$1,467,188	\$1,038,056
Publications	517,941	344,915
Membership	109,784	71,782
Other	20,350	37,491
<b>Total Expenses</b>	\$2,115,263	\$1,492,244
<b>Net Operations</b>	<b>432,526</b>	<b>67,848</b>
<b>Realized Gain (Loss)</b>	5,198	11
<b>Unrealized Gain (Loss)</b>	39,448	7,217
<b>NET INCOME</b>	\$477,172	\$75,076

### Balance Sheet Notes

1. Income from operations exceeded expenses in 2006 by \$ 432,526
2. IS&T's 2006 Annual Report is available to members upon request.

### Statement of Income Notes

General Administration and Labor allocations in 2006 were as follows: Publications 27.7%; meetings 66.9%; membership 5.3%. These percentages were applied to administration and labor expenses to determine a net gain (loss) for publications, meetings, and membership.

IS&T's investments are administered through Smith Barney in Washington, DC. The investments are currently invested in Money Market funds, US Government Federal Agency bonds, CD's and in the TRAK stock portfolio. As of December 31, 2006, these investments had a market value of \$ 524,035.

of outgoing Presidents, I took the long view and spoke on “Challenges Facing IS&T in the 21st Century.” As food for thought as we move collectively forward in this rapidly-changing world, I will repeat here one of my key points from that short presentation.

On whole, the Society for Imaging Science and Technology has done a remarkable job of adapting to changes in technology during its 60 years of existence. Only 30 years ago, our primary focus was silver-halide photography. Through strong, far-sighted leadership, the Society has moved into technical fields that barely existed in 1977, demonstrating that imaging is a very rich field of study. And we are still leading the changes in imaging technology as witnessed by our newest conferences: Archiving, Digital Fabrication, and Technologies for Digital Fulfillment.

Today we face a new kind of challenge as a technical society, one that blurs the boundaries of what was traditionally consid-

ered “imaging” and because of its pervasiveness threatens to weaken our position.

While the science of imaging continues to evolve technically, it has changed rapidly in its commercial role. Digital imaging technology is as much a part of the “Digital” world as the “Imaging” world. Once upon a time, “imaging” was mastered by “imaging companies” to produce “imaging products.” Imaging Science, in its broad sense, was the primary technical strengths of these companies. Customers bought their products primarily to capture or print images.

There still are important “imaging companies” and “imaging products,” but many key technologies and much commercial activity have become part of a larger universe. Many companies that excel in semiconductors, computers, and communications are becoming strong players in products used for imaging. They still need Imaging Science, of course, but they may not know it. As I write this, the hype over the iPhone is just starting to die down.

Think about all the ways in which Imaging Science is involved in the design and perceived value of this product. While apparent to us, how apparent is it to others less familiar with our science?

These are the challenges for IS&T: How do we thrive in a world where Imaging Technology is spread far and wide throughout the world, in companies that realize its importance, as well as those that take it for granted? How must we as a Society change to remain the place imaging professionals come to share their knowledge and reinforce their excitement about the science and technology of imaging? And how do we continue to create a vibrant, dedicated community in a world that tends toward dispersion? These are the questions I’m reflecting on as I leave the office of President. The answers will undoubtedly come from our dedicated membership base and headquarters’ staff under the leadership of our Board. All yours, Eric.

—Respectfully submitted, James R. Milch

#### 2006-2007 MEETINGS DATA

**Meeting:** NIP22 / Digital Fabrication 2006  
**General Chair:** Eric Stelter / James Stasiak  
**Attendance:** 781  
**Papers:** 160 / 52  
**Tutorials:** 23

**Meeting:** CIC14: Color Imaging Conference  
**General Chair:** Raja Bala and Marc Mahy  
**Attendance:** 258  
**Papers:** 61  
**Tutorials:** 20

**Meeting:** Electronic Imaging Symposium 2007  
**General Chair:** Michael Kriss and Robert Sprague  
**Attendance:** 1,278  
**Papers:** 862  
**Tutorials:** 24

**Meeting:** Technologies in Digital Fulfillment 07  
**General Chair:** Stuart Gordon  
**Attendance:** 47  
**Papers:** 26  
**Tutorials:** 0

**Meeting:** Archiving 2007  
**General Chair:** Scott Stoval  
**Attendance:** 211  
**Papers:** 42  
**Tutorials:** 12

## Publications Annual Report

July 1, 2006 to June 30, 2007

### Journal of Imaging Science and Technology (JIST)

Report submitted by Mel Sahyun, editor

2006 marked the final year in which the print edition of JIST was the default delivery method for members and subscribers. Starting in 2007, JIST is delivered online via the Scitation® platform (scitation.aip.org)—the print edition is available for an extra charge—following a model that has proved successful for JEI, the Journal of Electronic Imaging, and corresponds to the way most readers use them. This was also the first full year of working with the American Institute of Physics, who produces and hosts the online version of the Journal.

While during the last few years there has been an increasing demand for publication of color graphics, the cost of color printing has not decreased enough to put the use of color in reach of most authors.

Transition to a web-based publication makes the use of color generally accessible to authors, but introduces the technical challenge of how to enable readers to see the color graphics as the authors intend (not that this isn’t also an issue with traditional printing). To this end, the January/February 2007 issue included guidance for authors and readers on the preparation and display of color imagery for web publication thanks to Patrick Herzog of OneVision SW Entw. GmbH & Co. KG.

In 2006, JIST

- published 70 papers; we hope to increase this number now that we are a web-based publication, which has positively effected the Journal’s budget. This will help decrease submission-to-print times of articles. Of the papers published in 2006, 22 (31%) were derived from IS&T conference presentations, down significantly from previous years.

- received approximately 90 submissions, down from the previous year's high of 120, of which more than half were conference derived.
- ran special sections on Color Imaging Science and Digital Printing Technology, both based on the corresponding 2005 Conferences.
- rejected 29 papers (32%), up from historical rejection rates of 20-25%.

In the first half of 2007, JIST ran two special sections of papers based on presentations at ICIS'06 in the second and third issues.

The Journal was fortunate to have had the services of 94 reviewers in 2006, whose contributions are critical to maintaining the technical quality of the Journal. My own philosophy of the peer review process is that its primary purpose is not gate keeping per se, critical as that function may be. Rather it is to provide direction and assistance to authors, to enable them to present their work as convincingly and clearly as possible. In addition, 2006 saw the emergence of a real spirit of collegiality among our Associate Editors, enabled by a series of virtual discussions of topics relevant to the Journal's editing and publication. The input and advice of these colleagues has been of great value to me as we move forward. Finally I would like to recognize our production editor, Donna Smith of the IS&T staff, who keeps the workflow moving, helps us stay organized, and facilitates communication among the editorial staff, authors, and AIP. Many thanks to all who made 2006 successful for JIST.

#### Journal of Electronic Imaging (JEI)

Report submitted by Jan Allebach, editor

The Journal of Electronic Imaging received an impact factor of 0.801 for 2006, ranking 7th out of 11 journals in Imaging Science, 94th out of 206 in Electrical Engineering, and 33rd out of 55 in Optics.

In 2006, JEI:

- published 82 papers, including 67 contributed papers, 10 special section papers, and 5 letters.

- received 184 submissions, including 148 contributed papers, 11 special section papers, and 25 letters.
- published a total of 868 pages.

In the first half of 2007 (through the month of June), JEI has:

- published 29 papers, including 27 contributed papers and 2 letters.
- received 110 submissions, including 75 contributed papers, 29 special section papers, and 6 letters.
- published 300 pages.

JEI published two special sections in 2006:

- Security, Steganography, and Watermarking of Multimedia Contents (Edward Delp and Jana Dittmann, guest editors)
- Color Imaging: Processing, Hardcopy, and Applications (Reiner Eschbach and Gabriel Marcu, guest editors)

The following special sections are planned for publication in upcoming issues:

- Biometrics: Advances in Security, Usability, and Interoperability (Claus Vielhauer, guest editor)
- Quality Control by Artificial Vision (Hamed Sari-Sarraf, David Fofi, and Nelson Yung, guest editors)

H. Joel Trussell was appointed as a new Senior Editor in 2006. New Associate Editors include Philip Dang, Sven Dickinson, Brian Funt, Michael Gormish, Katsuhiko Kanamori, Choon-Woo Kim, Walter Kropatsch, Thrasyvoulos N. Pappas,

Nicu Sebe, and K.P. Subbalakshmi. Graham Finlayson, Nikolas Galatsanos, Hiroaki Kotera, Gerhard Ritter, Amir Said, and Luis Torres have stepped down from the editorial board. ▲

## IS&T REPORTER

The IS&T Reporter is published bimonthly by IS&T—The Society for Imaging Science and Technology.

#### Editorial

Executive Editor	Vivian Walworth
Managing Editor	Donna K. Smith
Production Editor	Itzel Morales
Standards Editor	David McDowell

Articles and letters to the editor in this newsletter do not necessarily constitute endorsement or reflect the opinions of the editors or IS&T. Advertising and copy are subject to acceptance by the editors.

IS&T is an international, non-profit society whose goal is to keep members aware of the latest developments in fields related to imaging science through conferences, journals, and other publications. IS&T focuses on imaging in all its aspects, with particular emphasis on silver halide, digital printing, electronic imaging, color science, photofinishing, image preservation, pre-press technology, and hybrid imaging systems.

IS&T publishes the Journal of Imaging Science & Technology and, in conjunction with SPIE, the Journal of Electronic Imaging.

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We hope to see you at

**CIC15**



**IS&T/SID's Fifteenth  
Color Imaging Conference**

November 5-9, 2007

**Albuquerque, New Mexico**

[www.imaging.org/conferences/cic15](http://www.imaging.org/conferences/cic15)

Continued from page 2

He used the phrase—and it struck me as important so I wrote it down—“Lack of visualization creates lack of concern.” Perhaps if we dig deeper in Piaget’s work we’ll find him describing a phase in human development when a person just assumes that an object that’s out of sight will last forever, but periodically becomes upset when he or she is told that it won’t. Or not. Sometimes it matters and sometimes it doesn’t.

Let’s start at the beginning. If you ask who invented photography, the usual answers are L.J.M. Daguerre and Henry Fox Talbot. If the respondent is a little more knowledgeable, they might reply that Joseph Nicéphore Niepce invented photography. Actually, these are the people that invented photographic processes that had sufficient permanence to last long enough to show to someone else. Depending on whose account you want to believe, people had been making images with light for more than a century before anything stable enough to lay claim to the invention had been produced. This bit of history is the first but definitely not the last demonstration of the first cardinal rule of permanence, namely that major new technologies almost always have permanence problems. (Any resemblance between the preceding statement and the agonizing issue of digital image preservation is purely coincidental.) However, I do warn future claimants to have invented digital imaging to be able to produce a digital file to prove it. This may mean that in the 22nd century, they’ll finally settle on 2039 or so as the date when digital imaging was invented, because that’s the oldest digital file they’ll have around.

Mention of Talbot brings us to the second cardinal rule, which has to do with making money off images and the question of how much permanence is enough. Talbot invented photography on paper, which, as we know now, meant his process of silver images lasted long enough to get some interest from venture capitalists. In his case, he already was a wealthy nobleman, and decided to act as his own venture capitalist. He started a business selling photographic views and reproductions of works of art. The business was known as the “Reading Establishment” and Talbot set up the very able Thomas Malone as general manager. Malone was later part of the famous “Fading Committee” of 1855, which took on the challenge of explaining what happened next. Talbot was the first to learn the lesson that the market will punish products whose permanence is truly awful. Because the importance of fresh fixer and proper washing of prints was not understood, the Reading Establishment sent out over 1000 sample prints as a supplement to the periodical *The Art Union*, which was read by the very best of British society. Because the post took more than a month to reach the far-flung and often more humid reaches of the British Isles, many subscribers found their print to be a faded, greenish-yellow mess that did not look at all like it did when it left the ‘Establishment.’ Talbot was mortified and left the imaging business for good.

If the market punishes truly awful permanence, does that mean the market will work its invisible hand to guarantee that only very stable products become successful? No, absolutely not.

Cardinal rule number three says that historically, technologies whose chief virtue is longevity but which also come with a premium price relative to the mainstream imaging method of the day have almost never become successful enough to dislodge the market leaders. Examples of this are legion. To name just a couple of the most prominent: In the 19th century the extraordinarily stable pigment images of the carbon print process were predicted to dislodge the silver print Market leaders. They didn’t, mainly because carbon prints are too difficult and costly to make. In the 20th century it was well known that silver images were unstable on their own and required the extra step of sulfur, selenium, or gold toning. Nobody much did it, and I dare say the manufacturers didn’t press the point too hard because it was extra work and trouble. Ansel Adams did it and we love him for it. Just as we will love the sainted few who manage to have the foresight and savvy to do what it takes to make their digital images survive for a long time. Far from ‘perpetuity,’ I’ll settle for a century or two. This conference makes very clear that survival of digital information is complex and costly, if it’s possible at all. That says cardinal rule number three is going to come into play in a big, big way.

One last example of cardinal rule number three: In the 1980’s, Kodak’s so-called “low-fade” color motion picture print film was offered at a 10% price premium. Nobody bought it. Later on after Martin Scorsese and others made a public fuss, the manufacturers improved stability of all their offerings. Martin Scorsese, Henry Wilhelm, and many others who raised a fuss did our society—and me personally—a favor we should thank them for. That’s the fourth cardinal rule: fusses are helpful in stimulating the waxing phase of concern for permanence. The waning phase is human nature and takes care of itself.

Speaking about the poor permanence of chromogenic color images brings us to the present day and why I am standing before you. And it brings us back to the fifth Google entry under “permanence: Fifth down in the Google list you will find the Image Permanence Institute at Rochester Institute of Technology, which is an academic institute co-sponsored by IS&T. IPI, as we call it for short, is devoted to research and teaching in the permanence of images and other forms of recorded information. IPI began as a response by the imaging industry to the very bad taste left by the fuss over chromogenic color dye fading. Ironically, no sooner was it founded than the fuss died down, but it was enough to give us our start. We’ve tried to educate and advocate for permanence, which brings us to the final irony, that permanence itself is impermanent, and needs tending like every other human creation. ▲

## PROCEEDINGS

for Archiving 2007  
—and many other IS&T conference—  
are available in hardcopy and online format.

Members can download papers from any conferece for free.  
see [www.imaging.org](http://www.imaging.org) for information

## UPCOMING EVENTS

September 16–20, 2007; Anchorage, Alaska  
**DF2007: Digital Fabrication Processes (co-located with NIP23)**  
General Chair: Ross Mills

September 16–21, 2007; Anchorage, Alaska  
**NIP23: The 23rd International Congress on Digital Printing Technologies (co-located with DF2007)**  
General Chair: Ramon Borrell

November 5–9, 2007; Albuquerque, New Mexico  
**IS&T/SID's Fifteenth Color Imaging Conference**  
General Chairs: Ian Morovic and Charles Poynton

January 10–13, 2008; Zhanjiang City, China  
**The 6th International Conference on Imaging Science and Hardcopy ICISH'2008**

January 26–31, 2008; San Jose, California  
**Electronic Imaging 2008**  
General Chair: Nitin Sampat

June 10–13, 2008; Terrassa, Spain  
**CGIV 2008: IS&T's Fourth European Congress on Color in Graphics, Imaging and Vision**  
General Chair: Jaume Pujol

June 24–27, 2008; Bern, Switzerland  
**Archiving 2008**  
General Chair: Rudolf Gschwind

## OTHER MEETINGS

September 18–September 20, 2007  
**Collaborate-Innovate-Creat; Managing Colour in Digital Processes & the Arts**  
Sponsored by: EU Framework 6 - Marie Curie Actions;  
[www.create.uwe.ac.uk](http://www.create.uwe.ac.uk)

September 27–September 29, 2007  
**15th Conference on Software, Telecommunications and Computer Networks (SoftCOM 2007)**  
Sponsored by: IEEE Communication Society (COMSOC);  
[www.fesb.hr/SofCOM](http://www.fesb.hr/SofCOM)

October 10–October 12, 2007  
**Second IEEE International Workshop on Horizontal Interactive Human-Computer System (Tabletop2007)**  
held in conjunction with ACM UIST 2007; [www.ieeetabletop2007.org](http://www.ieeetabletop2007.org)

November 28–November 30, 2007  
**17th International Conference on Artificial Reality and Telexistence**  
Sponsored by: ArtAbilitation 2007; [www.icat2007.org](http://www.icat2007.org)

February 16–February 1, 2008  
**SPIE Medical Imaging**  
Sponsored by: SPIE: [www.spie.org/events/mi](http://www.spie.org/events/mi)

For a more complete listing of imaging conferences, visit  
[www.imaging.org/conferences/othermeetings.cfm](http://www.imaging.org/conferences/othermeetings.cfm)



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