

President's Letter

Susanne Friend

Dear Membership,

Well, here we are again, almost six months to the day that I wrote my last missive. No, I will not weary you with obsessional cheese stories this time. I have another obsession to talk about. Of course it has to do with conservation, you sillies.

But first, let me remind you that we have a meeting coming up! Plans for this year's annual WAAC meeting are moving forward, and I encourage you all wholeheartedly to make the trip to this lively Mecca of fun, good food, and sun in October. The meeting will be held at the newly reopened Getty Villa beginning the morning of Friday, October 24th, and ending mid-day on Sunday, the 26th.



Photograph by Ellen M. Rosenberg and Tahnee Cracchiola

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The Outer Peristyle at the Getty Villa in Malibu

Recently added to the agenda and back by popular demand is Yosi Poseilov's Digital Photography for Conservators workshop, which will be held the two days prior, on the 22nd and 23rd. The workshop will be held at the Getty Center, so those who attend will benefit from a double Getty exposure... Please see the *Newsletter* insert for further details.

I felt we could not have another meeting in Los Angeles without including LACMA in the program. To this end, I have decided that instead of a banquet we will have a second reception at this marvelous museum. This is still in the planning process, but will hopefully be approved in the weeks to come. If so, on the Saturday we will have the opportunity to mingle, eat and drink, see the new Broad Contemporary Art Museum (BCAM), and wander around LACMA's 20 acre campus which is in the process of an exciting evolution.

Talks have already started to flow in, and those of you who are interested in presenting may either send them directly to me or contact your nearest board member. I have asked board members to solicit presentations in their geographic areas as they are better acquainted with the people closer to them, so specialty doesn't really matter. Don't be shy – the talks we always remember are often the ones that seem like they wouldn't fit. This is WAAC – it may be outré, but it's quality. And in case I was too subtle, THIS IS A CALL FOR PAPERS!

Contents

President's Letter	1
Digital Photography Workshop	3
Regional News	3
Membership	8
Jobs	9
Conservation Issues: The Case of Time-Based Media Installations by Marie-Catherine Cyr	10
UV and Visible Light Filtering Window Films by Samantha Springer	16
AYMHM	24

President's letter, continued

The meeting schedule is designed to give us time to wander the gorgeous Getty grounds and galleries (love that alliteration) as well as have lab tours and visit the relatively new UCLA/Getty Master's Program on the Conservation of Ethnographic and Archaeological Materials. Because of timing and in the interest of saving everyone some money, we have arranged to have boxed lunches available during the noon break. This is, of course, optional, but since we will be captive up there in the rarified Malibu air, we will have no choice but to eat Getty fare of some kind. The registration form will have a line item for the boxed lunches on it.

A note on accommodations: There are many conservators living in the Los Angeles area who may take pity on those coming from out of town for the extra expenses they will incur. Although WAAC is not set up to broker requests for or offers of accommodation, grapevine transmissions will be much appreciated. You know if you have room and who might benefit from it...

For those of you who will be staying in hotels, the Getty has an arrangement with the Doubletree Guest Suites in Santa Monica (santamonicasuites.doubletree.com). A double room rate has been reserved for us at \$179/night which will held until Tuesday, September 23rd. A block of 20 rooms has been reserved. If you choose not to rent a vehicle, a 0.2 mile stroll will get you to a public bus that drops you off in front of the Villa in about 15 minutes. There are many other hotel options, of course. If you want to spend more, there is the Ambrose Hotel (ambrosethote.com), around \$240/night, the Channel Road Inn – very close to the Villa (channelroadinn.com) or The Georgian (georgianhotel.com). Cheapest and closest is the Bay Side Hotel at \$129-169/night (baysidehotel.com) and a bit further away but quite reasonable in Westwood (near UCLA) is the Claremont Hotel (claremonthotel.net) with room rates between \$60-80/night. Because Los Angeles is a major tourist destination at any time of the year, I urge you to make your plans as early as possible.

All of this will be detailed in the registration packet which you will receive soon.

What was I saying about obsessions? Oh, yes. I have been juggling lately. The sort of juggling we all do, not the apples or chain saws kind. While struggling to properly wear the WAAC hat, the mom hat, the conservator hat, and the cheese lady hat, I have been also working out five hours a week with the aim of getting my black belt in Tae Kwon Do. I started doing this about six years ago because it seemed the natural offshoot of sitting and watching my children doing it. What began as something fun and hopefully slimming has turned into a life necessity. It has brought me improved health, sanity, and helps keep the cheese side-effects at bay. It's fun and never boring. For the last ten weeks I have been taking special black-belt preparatory classes with the Grand Master in order to take the test. On June 6th I will stand up with a few others who have worked equally hard and for five hours prove to myself and my family that I have finally earned that symbolic band of cloth. I lied, that didn't have anything to do with conservation, although if anyone out there can tell me how to restore my poor broken body, I'll be happy to listen.

Fondest regards,
Your president,
Susi

(She passed. *Ed.*)

Due to the costs of shipping and handling, the **prices for back issues of the Newsletter have been changed**. The new prices are:

Issues Vol.1 - Vol.14, #3 (Sept. 1992) are \$5/copy;
Issues Vol.15 - Vol.29, #3 (Sept. 1997) are \$10/copy;
Issues Vol.30 (Jan. 2008) and after are \$15/copy.

As always, a 20% discount will be given to libraries seeking to obtain back issues to complete a "run" and for purchases of ten copies or more of an issue.

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EDITOR

Carolyn Tallent

REGIONAL NEWS

Scott Carrlee

TECHNICAL EXCHANGE

Albrecht Gumlich

HEALTH & SAFETY

Chris Stavroudis

ARTICLES YOU MAY HAVE MISSED

Susanne Friend

COPY EDITOR

Wendy Partridge

Photocopying

To make academic course packets that include articles from WAAC Newsletter, contact the authors of the articles directly.

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Deadline

Contributions for the September *Newsletter* should be received by the Editor before **August 1, 2008**.

Western Association for Art Conservation

The Western Association for Art Conservation (formerly, the Western Association of Art Conservators), also known as **WAAC**, was founded in 1974 to bring together conservators practicing in the western United States to exchange ideas, information, and regional news, and to discuss national and international matters of common interest.

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VICE PRESIDENT

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Individual Membership in WAAC costs \$35 per year (\$40 Canada, \$45 overseas) and entitles the member to receive the WAAC Newsletter and the annual Membership Directory, attend the Annual Meeting, vote in elections, and stand for office. Institutional Membership costs \$40 per year (\$45 Canada, \$50 overseas) and entitles the institution to receive the WAAC Newsletter and Membership Directory. For membership or subscription, contact the Secretary.

Internet

Articles and most columns from past issues of WAAC Newsletter are available on-line at the WAAC Website, a part of CoOL (Conservation OnLine) hosted by Stanford University Libraries, at <http://palimpsest.stanford.edu/waac/>.

Digital Photography for Conservators Workshop

Wednesday, October 22 and Thursday, October 23, 2008 - \$150

Yosi A. R-Pozeilov

Staff Photographer, Los Angeles County Museum of Art Conservation Center

Learn the basics of digital imaging and unique applications that are vital to the conservator's proper documentation of treatments with this popular workshop. The workshop specifically addresses issues encountered by conservators. It will cover the basics of the digital imaging, starting with the identification of proper digital imaging capture devices (i.e. digital cameras, scanners, etc.) and their most efficient methods of use; the importance of knowing the purpose or intended destination of the images generated; some aspects of lighting; image transfer mechanism and preservation; and a brief discussion of image editing software. Note: please e-mail any questions that you would like to see answered in this workshop to: yosipozeilov@yahoo.com.

Silent Auction!!!!!!!!!!!!

WAAC will be hosting a Silent Auction benefit again this year. Last year's auction was particularly fun and successful because we had so many great contributions – so please think about bringing or sending items of any kind – books, tools, kitsch, what-have-you. To donate, simply bring items along to the first day of the meeting – a little earlier than the talks begin, please! Or, if you can't or don't want to carry them, send them ahead of time with your name, address, telephone number, e-mail, and suggested value of the object included, to Carolyn Tallent, address listed to the left under Editor. Bev Perkins will once again be in charge: Beverly Perkins, BevP@BBHC.org, (307) 578-4029

(We are expecting a lot of good stuff from local people.)

Regional News

*Scott Carrlee,
column editor*

ALASKA

Monica Shah is working on an emergency plan for the museum, in addition to working on exhibits and exhibit-driven treatments. She finished the first half of an IMLS-funded project for the Hoonah Indian Association. The project goals are to help manage their collections and train their staff in collections management and preventive conservation.

Ellen Carrlee recently completed the excellent AIC online course for digital photography. She is currently pondering the conservation issues surrounding two large objects: a possible acquisition of an 18-ton 1914 electric mine locomotive and a proposed restoration of a rare unaltered 1930s Bristol Bay Double Ender (wooden fishing boat.)

Scott Carrlee was in Washington, DC in Feb. to sit on one of the IMLS Conserva-

tion Project Support Panels. He is currently being kept busy with coordinating 6 internship projects that will take place at small museums around the state.

Janelle Matz is overseeing several contracts with the Alaska State Council on the Arts including managing the Alaska Contemporary Art Bank and the re-installation of the Alaska Native Art collection at the Anchorage International Airport. She is scheduled to finish her thesis for the MA Preventive Conservations Program at Northumbria University in June.

Regional Reporter:
Scott Carrlee

ARIZONA

Liz Welsh is in her last semester of law school at Arizona State University, en-

Regional News, continued

joying an internship at the state legislature...onward to the bar exam in July!

Brynn Bender and **Maggie Kipling** surveyed, packed, and moved objects from Tumacacori National Moundment in preparation for implementing the redesign of their exhibit space. The lab will be treating the objects in preparation for their return to exhibit. Maggie and **Audrey Harrison** are treating ceramics from Canyon de Chelly National Monument and the collections repository. Brynn is also busy filling in for the senior conservator position as **Gretchen Voeks** has left to attend graduate school for Chinese acupuncture. We are all very happy for her.

Teresa Moreno has recently been promoted to associate conservator at the Arizona State Museum and has been awarded tenure at the University of Arizona. Congratulations Terry!

She continues her work as part of the Arizona State Museum team that is working with the University of Arizona Science Center to develop plans for a new joint museum exhibition facility that will be located in downtown Tucson.

The Arizona State Museum Pottery Project Survey is rapidly continuing as **Marilen Pool** and **Norine Carroll** continue their work. The opening of the Pottery Vault Interpretive Gallery is has arrived and exhibit-related work is well underway.

Gina Watkinson is continuing her work with Native American Indian silver for the *Set in Stone* exhibit. She has also been working on several spot testing projects with **Nancy Odegaard** and **Dave Smith** as well as focusing on organizing the Preservation Division's digital photographs.

Caitlin O'Grady attended the "Holding It All Together: Ancient and Modern Approaches to Joining, Repair, and Consolidation" conference at the British Museum in London where she presented a poster. She is currently working on portable XRF research which she presented at AIC in Denver in April.

Regional Reporter:
Brynn Bender

HAWAII

Regional Reporter:
Lynn Ann Davis

GREATER LOS ANGELES

Tania Collas, head of conservation at the Natural History Museum of Los Angeles County, has been overseeing the fumigation of the majority of the automotive collection to address a moth infestation while advising on the move of these vehicles post-fumigation to a new storage facility. At the same time, Tania and senior consulting conservator **Claire Dean** are continuing their work on the museum's new permanent exhibits.

In addition, Claire will soon be heavily involved with the de-installation of the museum's Ancient Latin America hall, as will conservation technician **KT Olson**. KT recently attended the annual conference of the Society for the Preservation of Natural History Collections, hosted by the Sam Noble Oklahoma Museum of Natural History in Norman, OK. KT is also assisting with conservation work for one of the new exhibits, *Under the Sun*, including the preparation of an historic oil pump and the treatment of an early Chinese-import lacquer sewing table.

Final year intern **Jennifer Kim** (NYU Program) recently performed an extensive treatment on an electrically heated leather flight suit worn by early aviatrix Bobbi Trout slated for the same exhibit. Jennifer has also been studying deterioration in bornite minerals in the Mineral Science collection.

Sculpture Conservation Studio was awarded a Los Angeles Conservancy Award for the conservation of Helen Lundeberg's *History of Transportation*, a 240-long WPA petrachrome mural in Inglewood, CA.

Rosa Lowinger of Sculpture Conservation Studio has been awarded the Rome Prize in Conservation for 2008-2009. Rosa will be spend 11 months at the American Academy in Rome doing a comprehensive study of art vandalism with an emphasis on creating new

theoretical models for the protection of outdoor public art.

SCS conservator **Andrea Morse** has completed the conservation of a 1915 cast stone lantern in Kauai, HI and has been carrying out a survey of the collection at the San Diego airport.

Ozge Gencay-Ustun, student from the new UCLA/Getty Conservation Program, is working on her third year internship at the Southwest Museum of the Autry National Center. She is treating and documenting the wide variety of ethnographic and archaeological objects that are in the process of moving. In addition, Ustun is working towards her thesis research at the LACMA's Conservation Science labs to demonstrate the limitations of portable XRF analyzers to quantify the heavy metal pesticides in organic artifacts. She has presented her study at various conferences including the Biocides Seminar in Berlin and the upcoming XRF Seminar at the Chicago Field Museum and the IIC Conference in London.

Catherine Metzger, senior conservator of paintings at the National Gallery, Washington, was in residence as a guest scholar at the Getty Museum for three months beginning in January of this year. She is co-authoring the southern California volume of the Corpus of Fifteenth-Century Painting in the Southern Netherlands and the Principality of Liège. Her studies catalyzed a unique opportunity to have two tüchleins by Dirk Bouts, *The Annunciation* from the Getty Museum and *The Resurrection* from the Norton Simon Museum of Art re-united for a brief time in the paintings conservation studio at the Getty.

Laurent Sozzani, senior restorer from the Rijksmuseum, came to the paintings conservation department at the Getty as a guest conservator in February. He brought with him a pair of Frans Hals portraits from the Rijksmuseum collections, and worked on them - along with members of the department and in collaboration with the Scientific department at GCI - during a three-month period. After completion of the studies and treatments, the pictures will remain at the Getty on view in the public galleries until the Rijksmuseum re-opens at some

Regional News, continued

point in the future.

In October 2007, **Jim Martin** began an apprenticeship as a conservation technician with **Jo Q. Hill** (Fowler Museum at UCLA). His activities have included condition documentation of a group of Bengali scrolls (painted paper backed with fabric) and assisting with the mounting and documentation of two large shows in the museum's galleries, *Make Art/Stop AIDS* and *Mami Wata: Arts for Water Spirits in Africa and Its Diasporas*. Jim is a retired professional with a background in professional theatre, social work, and academia; he continues to remain active as a theatre director.

Roz Westmoreland is finishing conservation treatments on two 16th-century polychrome busts in the collection of Hearst Castle. They will be in the forthcoming exhibit at LACMA on William Randolph Hearst's collections.

The return of the Louisiana State Museum's 200 thousand object collection to its New Orleans facility (newly renovated post-Katrina) benefited from the experience of two LA area WAAC members. **Ashley McGrew** of the Getty Museum made a two day preliminary visit in December of 07 to design systems to integrate the collections packing and rehousing needs. In January of '08 he was joined by **Angela McGrew** of the Autry National Center's Southwest Museum of the American Indian for a two day workshop with museum staff and a move team provided by the Williamstown Conservation Center. The project is being managed by **Katherine Holbrow** and supervised on site by **Allison Leone**. **Suzanne Morris** of the Getty/UCLA program will be working with Angela McGrew at the Autry National Center, Southwest Museum, to fulfill an elective requirement this quarter. Suzanne will focus on the treatment and packing of inorganic materials.

The UCLA/Getty Program in the Conservation of Archaeological and Ethnographic Materials is pleased to announce its new group of students, who began the curriculum in September 2007. They are:

Siska Genbrugge, who has a BA in art history from the Katholieke Universiteit Leuven (Belgium). This summer she

will be interning at the Athenian Agora Excavations (Athens, Greece) and the Afrikamuseum (Tervuren, Belgium).

Lauren Horelick received her BFA in sculpture from the San Francisco Art Institute. This summer she will be interning at the Gordion Excavation Project (Gordion, Turkey) and the Field Museum (Chicago, IL).

Jiafang Liang received her BS in the conservation of historical heritage from the Northwest University (China). This summer she will be interning at the Freer and Sackler Galleries, Smithsonian and the Shaanxi Archaeological Institute (Xi'an, China).

Linda Lin, who received her BA in comparative literature from the University of California Irvine and was awarded a certificate in art conservation from the Studio Arts Center International (Florence, Italy). This summer she will be interning at the De Young Museum in San Francisco and the Shaanxi Archaeological Institute (Xi'an, China).

Suzanne Morris received her BFA in painting from Miami University (Ohio). This summer she will be interning at the Tarapaca Archaeological Project (Tarapace, Chile) and the Centro Nacional de Conservacion y Restauracion (Santiago, Chile). The entire class of first year students, and four of the third year students, will be attending the ANAGPIC at the Conservation Center at New York University in April 2008. This is the first opportunity for UCLA/Getty students and faculty to attend this important conference.

Regional Reporter:
Virginia Rasmussen

NEW MEXICO

The Conservation Department of the Department of Cultural Affairs was featured in the following articles: "Preserving the Treasures," in the *Santa Fe New Mexican* on 27 January 2008 and "waking the Puppets" in the *Santa Fe New Mexican* on 24 February 2008.

Joe Sembrat reports that Conservation Solutions, Inc. (CSI) recently completed a conservation treatment of the Saturn

V Rocket located at the US Space & Rocket Center in Huntsville, AL. Work began in 2005 with the assessment of the rocket's deteriorated conditions and ended with the fully restored Saturn V vehicle displayed for a widely anticipated grand opening celebration in late January 2008.

In late 2007, CSI completed the treatment of two zinc statues, Liberty and Justice, from atop the city hall building in Goldsboro, NC. The work consisted of rigging and removing the sculptures, removal of over 100 years of deteriorated coating, structural and surface repairs to the zinc sheet, gilding, and reinstallation of the sculptures.

CSI is currently engaged in the treatment of Fort Christian, a 17-th century fort located in historic Charlotte Amalie in St. Thomas, USVI; the treatment of six sets of monumental-sized aluminum night noors located at the Department of Justice Building in Washington, DC; the cleaning of the New York Public Library Lions; the conservation of over 300 artifacts from the RMS Titanic wreck-site; the on-going treatment of over 100 artifacts from the RMS Carpathia - the ship that rescued survivors from the Titanic; and the conservation of a courthouse mosaic located in New Orleans. Future undertakings include the assessment of the city of Asheville, NC public art collection and the treatment of the Glen Rose Dinosaur tracks currently on display at the University of Texas in Austin.

M. Susan Barger has become the director of Museum Development Associates, a non-profit that provides services for small and rural museums in New Mexico and the surrounding states. Museum Development Associates is offering a series of collections care workshops in the first half of 2008. These workshops are supported in part by grants from the Bay and Kerr Foundations. **Brynn Bender** taught one MDA workshop on the care of objects at the University Museum in Las Cruces in February.

The New Mexico State legislature provided \$20,000 to Eastern New Mexico University to work with Museum Development Associates to set up a professional certification program for staff in small museums. In addition, Barger has

Regional News, continued

also been acting as the courier for the *Diebenkorn in New Mexico* exhibition that originated at the Harwood Museum in Taos. In this capacity, she has gotten to see America by semi-truck while traveling to San Jose and Oakland, California, New York City, and Washington, DC.

Regional Reporter:
M. Susan Barger

PACIFIC NORTHWEST

On March 13, 2008, the Royal BC Museum opened a large temporary exhibition celebrating BC's 150th anniversary as a crown colony. Unfortunately that meant that we said good-bye to our temporary staff, **Jana Stefan** and **Tania Ainsworth**. We wish them both well and hope to have them back soon.

In February, two days after another stellar dog sledding trip during which she "improved" on her previous cold weather camping record and slept out tent-less at -48 degrees, **J. Claire Dean** went from one extreme to another and attended the TERRA 2008 conference on the conservation of earthen architecture held in Mali, West Africa. She is now continuing her work with the Natural History Museum of Los Angeles County, which is punctuated with various rock image conservation fieldwork projects.

Alice Bear completed conservation on works on paper for the Washington State Historical Society's new exhibition, *The West the Railroads Made*, on view April 13, 2008 through January 24, 2009, then traveling on to Portland and St. Louis.

Sarah Melching has closed her private practice in Olympia, WA. In March she began working as the Paper Conservator at the Denver Art Museum. Her new contact information is: Denver Art Museum, 100 West 14th Avenue Parkway, Denver, CO 80204. (720) 865-4444, semelching@denverartmuseum.org.

Over the last few months, **Susan Lunas** washed and repaired a "Build Sheet" for a 1937 Chevrolet. These documents provide the assembly people with the specifics for each vehicle. The crumpled, dirty document had been stuffed into a crevice up under the wheel well. She

also worked on a vellum painting by a follower of Bosch. Some of the gold leaf and paint had popped off, and she inpainted it to reduce the distraction of having the bole and ground show through.

Kristen Kern, preservation catalog librarian at Portland State University, is a trainer for the Western States and Territories Preservation Assistance Service, a National Endowment for the Humanities funded project to deliver emergency preparedness, response, and recovery workshops with the overall goal of completed disaster plans and trained staff for participating institutions. She is presenting workshops in Idaho, Nevada, and Oregon; other WESTPAS trainers are giving workshops in Alaska, Washington, California, Colorado, Wyoming, Utah, Montana, Hawai'i, American Samoa, Guam, and the Northern Marianas. More information can be found at www.westpas.org.

Regional Reporter:
Dana K. Senge

ROCKY MOUNTAIN REGION

Camille Moore, who has been assistant conservator with Silverpoint Art Conservation, LLC since May 2007, will become a partner later this year. Camille is already handling new clients, which is particularly helpful to **Laura Staneff** since she is expecting a second baby in June.

Laura and Camille have several recent collaborations to report: Laura and **Beth Heller** recently completed a Preservation Assessment and Long Range Preservation Plan for the American Alpine Club Library/Colorado Mountain Club Collection in Golden, with additional assistance from **Jeanne Brako**, who generously loaned a light meter from the Center of Southwest Studies. They have also been working on an etching with unusual delamination of the paper surface--their documentation of the piece has been greatly assisted by **Jessica Fletcher** at the Denver Art Museum, who assisted with photography through the DAM's stereomicroscope; and by Nancy Odegaard, Teresa Moreno, and Caitlyn O'Grady at the Arizona State Museum, all of whom have helped with spot tests and FTIR analysis.

Laura and Camille traveled to Tucson in March to work on a group of Ansel Adams photographs at the Intermountain Region Museum Services Program. And at home they are thankfully approaching the end of a two-year project treating a collection of Edward Curtis photographs, all of which are also being matted by **Joan Loughridge** at Dry Creek Gold Leaf, Inc. in Denver. Many thanks to all our collaborators!

Beth Heller, a book and paper conservator, has joined the staff of the American Alpine Club (AAC) as preservation librarian. The library, located in Golden, CO, specializes in materials related to mountain environments and activities, and includes circulating and rare books, archives, photographs, and ephemera. The AAC was the site of the 2008 AIC Angels Project.

Denver Art Museum conservators are pleased to report that **Sarah Melching** has joined us as Paper Conservator. After less than a month in the job, she has done several complicated treatments, dealt with a pest infestation, set up a lab, and become an indispensable part of our team. Welcome to Sarah.

Steve Osborne and **Carl Patterson** attended the first of a series of mount making conferences at the Getty Museum in Malibu, California. The meeting brought together a large number of people with similar interest, concerns, and solutions. Third-year intern, **Liz Homberger** will be spending July at the Getty Conservation Institute on a project that will help her source and identify proteins. Her current projects at the Denver Art Museum include investigating a viable solution for removing oils from basketry.

Gina Laurin, objects conservator, is coordinating the conservation of a number of pieces for the upcoming Asian rotation. **Tanya Uyeda** from the Boston Museum of Fine Art will be giving a lecture and workshop on the conservation of Asian paper at the DAM for collectors and museum patrons. **David Turnbull**, conservator of paintings and contemporary materials, is beginning a number of projects for the reinstallation of two floors in the museum's new Hamilton extension. Carl Patterson and Jessica Fletcher are fine-tuning a coop-

Regional News, continued

erative technical collaboration between the DAM and the Colorado School of Mines. This should lead to shared projects between graduate students and the conservation staff.

Hope Fry joined the staff of the Western Center for the Conservation of Fine Arts (WCCFA) as conservation technician in December. Hope previously worked at the conservation laboratory of the Standard Library at the University of Kansas in Lawrence.

WCCFA conservators will treat a group of 47 paintings by J. Alden Weir and his father, Robert Weir, for the Brigham Young University Museum of Art. The treatments will be performed over a 2 year period as part of a Save America's Treasures Grant, recently awarded to the university. The paintings were part of J. Alden Weir's estate and were left to his daughter, Dorothy, upon his death. Dorothy was married to Mahonri Young, one of Brigham Young's grandsons and an artist in his own right. The collection was left to Mahonri, when his wife died, and he bequeathed the collection to BYU upon his death. It is an interesting collection of finished and unfinished works by an important American artist and his father. It has been in storage at BYU for many years and has not been previously seen outside the family.

WCCFA conservator, **Cynthia Lawrence**, recently completed the treatment of *King of the Forest*, an oversized pastel on canvas by Rosa Bonheur. This painting is a recent acquisition by the National Museum of Wildlife Art in Jackson, WY.

WCCFA has completed its contract with the Utah State Capitol that included the on-site treatment of over 6000 sq. ft. of fixed murals in the capitol as well as the treatment of 21 individual paintings/governor's portraits that were transported to the WCCFA studio for treatment. This work was only a small part of the much larger project that included the expansion, renovation, and base isolation of the state capitol in Salt Lake City. The WCCFA contract began in 2004 and was completed in January of this year when **Carmen F. Bria Jr.** made a presentation on the mural treatments during the

re-opening and re-dedication ceremonies held at the state capitol that also included a grand performance by the Mormon Tabernacle Choir.

Regional Reporter:
Paulette Reading

SAN DIEGO

In March, paintings conservator **Betty Engel** attended the AIC-sponsored Modular Cleaning Workshop, taught by **Chris Stavroudis**, at the Chicago Conservation Center.

Regional Reporter:
Frances Prichett

SAN FRANCISCO BAY AREA

At Architectural Resources Group (ARG) and ARG Conservation Services (ARG/CS), conservator **Katharine Untch**, architectural designer **Kitty Vieth** and architectural historian **Katherine Petrin** presented their paper, titled "Glitz and Glam: Theatrics in the Historical Finishes of Timothy Pflueger" at the Third International Architectural Paint Research Conference, held at Columbia University in New York City.

Architectural conservator **Mersedeh Jorjani** presented "An Evaluation of Potential Adhesives Used in Marble Repair" at "Holding It All Together - Conference on Ancient and Modern Joining, Repair and Consolidation," held at the British Museum in London.

Architectural conservator **Kelly Wong** is continuing oversight of the exterior renovation of terra cotta cladding and new windows at 450 Sutter Street, an art deco building in San Francisco designed by Timothy Pflueger.

Architectural conservator **Mary Slater** is completing a conditions assessment and baseline documentation of the Suro Baths, opened in 1896 as the world's largest indoor swimming pool establishment. Mary is collaborating with an archeological team to produce a site map and with historians to outline the evolutionary history of the baths.

Mary Slater also conducted paint analysis research for the Hollywood Palladium.

Mary Slater and Architectural designer **Lisa Kucik** are completing an HSR for the Parra Adobe in San Juan Capistrano, California.

Preservation masonry specialist **Devlin McDonald** and conservation technicians **Collin Eaton** and **Eric Hand** completed removal and reinstallation of Bubblestone in Bernard Maybeck's First Church of Christ, Berkeley. Bubblestone is an early form of autoclaved aerated concrete (AAC) used by Maybeck as a fireproof material.

Katharine Untch, Devlin McDonald, Mersedeh Jorjani, Collin Eaton, and Eric Hand are treating a mosaic at the Masonic Auditorium in San Francisco. Twelve of the forty-five Plexiglas mosaic panels will need conservation treatments.

Devlin McDonald, Collin Eaton, and Eric Hand, in collaboration with Mission San Juan Capistrano conservator Samuel U'Ren removed the Portland cement-based wainscot of the Mission's Serra Chapel. The wainscot removal will be followed by adobe conservation.

Staff at the Oakland Museum of California have completed their 2-year project to rehouse three-quarters of the museum's fine art, cultural history, ethnography, photography, and science specimen collections into a redesigned, climate-controlled 62,400 sq. ft. open-storage facility, which included NEH support for high-density compact shelving. The construction and relocation project was directed by **John Burke**, assisted by **Julie Trosper** and **Milada Machova**.

With support from IMLS, Julie is continuing to work on rehousing about 3,000 California Native American baskets; the objects are being unpacked, tested for toxins with XRF, and will be rehoused in high-density compact shelving.

John, Julie, and Milada have also been working on collections deinstallation from the main Art and History galleries (altogether 60,000 sq. ft., and over 4000 artworks and artifacts) in preparation for major a building renovation campaign.

A number of important artworks have been identified for treatment prior to the galleries reopening in November 2009. These include 36 major paintings that Milada, along with **Alina Remba**, have been working on with support from the Henry Luce Foundation.

John spent a couple of weeks in December at the National Palace Museum in Taipei, working with conservation staff in the areas of solubility, microclimates, and modified atmosphere fumigation treatments.

Margaret (Meg) Geiss-Mooney has been elected as Treasurer of the Textile Specialty Group of AIC.

Molly Lambert and stone mason **Clark Mitchel** are conserving two Spanish monastery portals for the Jesuit Order of the University of San Francisco. The portals are reported to be 11th century and 15th century and were purchased by William Randolph Hearst and later acquired and displayed by the de Young Museum. In order to have detailed drawings and geometries of the masonry units and their assemblies, the portals will be 3D scanned by CyArk Heritage Network (Orinda, CA). You can deliver tapas to them at the work site in a not-so-lovely 1980s post-modern abandoned department store somewhere in San Francisco.

Sarah Gates and **Beth Szuhay** of the Fine Arts Museums of San Francisco have been working to prepare the monumental tapestry *Combat of the Virtues and Vices*, for loan to the Los Angeles County Museum of Art. The tapestry, which is Flemish and dates from 1510-1515, is from the Redemption series of tapestries. The tapestry will be on loan beginning in September.

Denise Migdail of the Asian Art Museum, **Hannah Riley** in private practice in Berkeley, and Beth Szuhay recently collaborated on *Art and Artifice*, the opening exhibition for the Museum of Performance and Design in their new gallery space. The exhibition is on view until August 30th.

Regional Reporter:
Beth Szuhay

TEXAS

The conservation lab at the Amon Carter Museum is pleased to be hosting **Hsu-Chiao Huang**, graduate conservation student from Tainan National University of the Arts, Taiwan, for a 3-month internship in the conservation of photographic materials. Ms. Huang will be working with **Sylvie Pénichon**, Carter's conservator of photographs.

The Nasher Sculpture Center is pleased to announce the recent addition of sculpture conservator, **John Campbell**, who specializes in modern and contemporary sculpture. Mr. Campbell's appointment advances Nasher's ongoing mission to be the global focal point for the exhibition, interpretation, and preservation of modern sculpture. Mr. Campbell most recently worked for a private conservation studio in New York City specializing in contemporary art. Prior, he was at the Museum of Modern Art in New York (MoMA) for approximately 3.5 years.

Regional Reporter:
Ken Grant
Head of Exhibition Services Dept.

Western Center for the Conservation of Fine Arts, LTD.

PAINTINGS CONSERVATOR

WCCFA is seeking a Paintings Conservator to join our staff. WCCFA is a private conservation facility specializing in the treatment of paintings. We have been in business since 1980 and our clientele includes museums, other institutions, as well as a variety of private sector clients throughout the western United States. Our staff presently includes a Director/Chief Conservator, three Senior Conservators, and an Assistant Conservator, as well as two Photographers/Conservation Technicians, and an office manager.

Duties will include: Examination, documentation, and treatment of a wide variety of American, European, and Spanish Colonial paintings, and on-site mural and survey projects.

Qualifications include a master's degree in conservation from a recognized training program or equivalent experience. A minimum of 3 years of post graduate experience is preferred, but all applications will be considered. For consideration, please submit a cover letter summarizing your interests, your resume and two letters of recommendation to carmen@wccfa.com or WCCFA, 1225 Santa Fe Drive, Denver, CO 80204. Additional information is available on our website: www.wccfa.com.

Every year he thought he might redo this area, and in fact, now that the big garden was about as done as it could possibly be without tearing the whole thing up and doing it all over again, it was the perfect time to begin. But the idea of beginning just made him want to go into his bedroom and sit down with a book - it would be a gardening book, maybe a big picture book or maybe something more technical - but it would not be a book that inspired him. It would be a book that soothed him into waiting another day.

from Ten Days in the Hills
by Jane Smiley

Handling Guide for Anthropology Collections

Straightforward text is paired with humorous illustrations in 41 pages of "do's and don'ts" of collection handling. A Guide to Handling Anthropological Museum Collections was written by Arizona State Museum conservator Nancy Odegaard and illustrated by conservation technician Grace Katterman. This manual was designed to be used by researchers, docents, volunteers, visitors, students, staff or others who have not received formal training in the handling of museum artifacts. Paper-bound and printed on acid-free stock.

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Donna Williams

Conservation Issues: The Case of Time-Based Media Installations

Introduction

New technologies are increasingly present in museum collections. They were considered experimental when used as art in the 1960s and pushed the boundaries of the art object, but today contemporary art institutions worldwide increasingly acquire such works. Mass produced objects, as introduced by Marcel Duchamp and his Ready-made in the second decade of the twentieth century, initiated the re-evaluation of the nature of artworks and questioned the notion of the original. Less than forty years later, mass produced technological objects made their way into galleries, raising more questions and catalyzing new debates. Still questioning the idea of the original, new media artworks pushed the limits even further: artists could now manipulate the immaterial. A pioneer in the field was South-Korean artist Nam June Paik. His piece *Magnet TV* (Figure 1), created in 1965, represents one of the earliest instances of the use of television monitors as part of art objects. Art pieces were soon sculpted using light (as we see in Figure 2 with Dan Flavin's

untitled work of 1996), space, architectural features (as in Figure 3, *Running*, a 2003 piece by Pascal Grandmaison), as well as time, codes, and sound.

The category new media is a very broad one; it encompasses different artistic manifestations, including anything from slide shows, sculptures incorporating video or audio signals, to virtual artworks, referred to as net art. Within this amalgam we also find time-based media installations; they are comprised of at least one of the following elements: film, slides, video, audio, and computer based elements, which are rendered in a space and context specified by the artist, and have a duration. By this definition, such pieces must be experienced in the context of the passing of a period of time. In order for these artworks to exist, two components need to be present: a signal and a display. Signals, as used

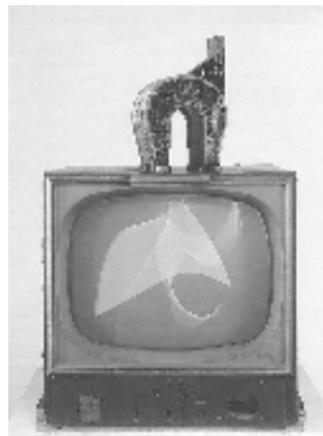


Figure 1. Nam June Paik, *Magnet TV*, 1965
©The Estate of Peter Moore

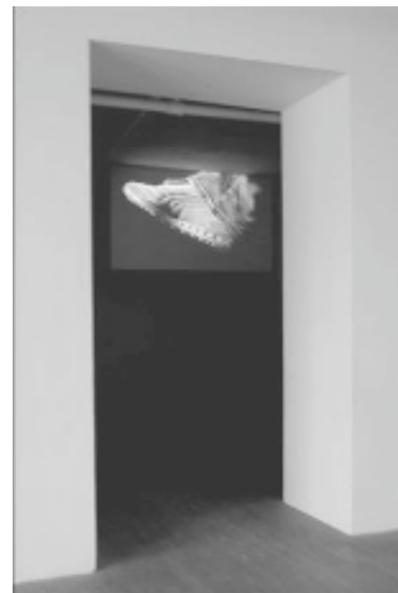
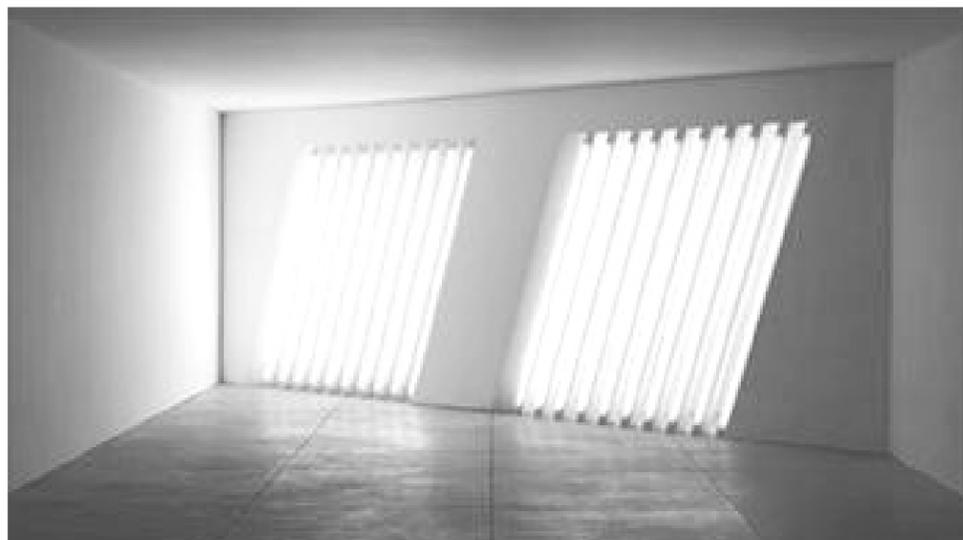


Figure 3. Pascal Grandmaison, *Running*, 2003
©Galerie René Blouin

Figure 2. Dan Flavin, *Untitled (Marfa Project)*, 1996
©The Chinati Foundation



in art installations, are encoded sounds or images which can be transmitted or decoded by a specific piece of equipment. Examples of these are audio and video magnetic tapes, CDs, DVDs, and computer programs. Display components include elements of space, lighting, acoustics, and the actual physical equipment. These in turn can be either sculptural or functional; a sculptural piece of equipment is one that has become an essential component of the physical and aesthetic scheme of the work. Functional elements, on the other hand, are often not visible and do not play a determined part in the visual rendering and meaning of the work.

A good example to illustrate these concepts is the 1991 installation by Gary Hill entitled *Between Cinema and a Hard Place* (Figure 4). There are two signals in this piece, video and audio, and both types of display are present; the exposed monitors (Figure 5) are both functional and sculptural elements since they are essential to the aesthetics of the piece. The disc player and computer are functional equipment only; they are kept hidden and synchronize the entire installation.

As with any new medium, conservators are faced with unique challenges when dealing with media art. A shift has occurred in meaning from the single precious art object to concepts and experiences. Professionals cannot rely on traditional preservation strategies to conserve artworks where significance is channelled in great part through the intangible. Even notions such as colours are not straightforward anymore. How does one conserve colours which can appear and disappear at will by the mere flick of a switch?

There is much to be said about conservation challenges presented by new media or anything digital; this is a vast research topic on its own. This paper focuses on problems raised by the conservation of time-based media installations. After having identified the issues and discussed challenges inherent to such artworks, innovative conservation strategies are briefly outlined. Four recent or ongoing international collaborative projects are then presented: DOCAM, The Variable Media Network, Media Matters, and Inside Installations.

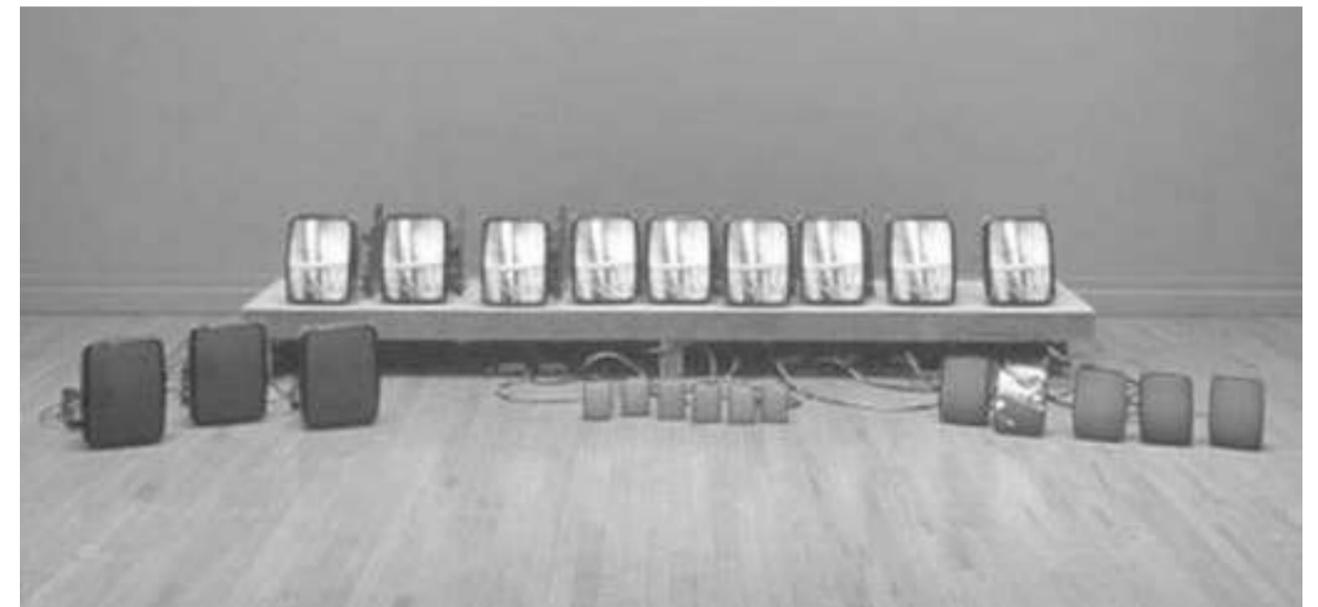


Figure 4. Gary Hill, *Between Cinema and a Hard Place*, 1991
©Gary Hill



Figure 5. Exposed monitor from Gary Hill's *Between Cinema and a Hard Place*, 1991
©Tate

Conservation Issues

The conservation issues raised by time-based media installations are hereby divided into six groups. First, we have the shift away from the unique object. As previously mentioned, one common aspect of contemporary art is to abandon, or at least question the notion of the work of art as a single, authentic object. Jon Ippolito, who is currently an Assistant Professor of New Media at the University of Maine, argues that from a preservation point of view, media-based artworks should be viewed as sets of instructions rather than precious originals. This notion is a great departure from traditional ideas of conservation where the physicality and materiality of the art object defined its unique character. While we still aim to retain the integrity of the work, the object itself cannot guide our practice, so we must go back to the artist's intent. One way of documenting this is with artists' interviews, a practice which is more and more widespread in museums.

Secondly, there is the factor of intrinsic vulnerability. Because a time-based media installation is best understood in its installed state as a dynamic system, it is in a state of near non-existence or dormancy for most of its life. This vulnerability is twofold: first, separating the installation elements shuts down the work, strips it of its meaning, and secondly, time-based media components naturally add a level of precariousness to the work. If the nature of the artwork is dependent upon the dynamic created between all parts when they are assembled in a certain way, then significance is context-dependent. This is yet another new element conservators must work with: the notion that a piece is created or revived when assembled brings forward the issue of authenticity. It is likely that the artist will not be present every time his work is prepared for exhibition, therefore not be present to a certain extent for its re-creation. This is why proper documentation is essential, especially at the time of the acquisition of a piece and during its first installation.

The risk that a work is not installed correctly or that it will not even be displayable in the future is ever present. Technological obsolescence is perhaps the most straightforward and pressing challenge in the conservation of time-based media artworks. The greater the significance of the equipment and technology is to the meaning of a piece, the more pressing is the risk of obsolescence. This means that there will be inevitable loss as time passes, technologies change and certain components are no longer manufactured or available. It is therefore imperative for conservators to define acceptable loss for individual artworks by determining the work-defining properties and the relation of components to the meaning of the installation. Conservation treatments of these pieces, then, come down to managing change.

Like other objects, time-based media installations are susceptible to degradation. Adding to the usual problems with corrosion and material deterioration, are certain forms of degradation specific to these types of artworks. Cathode ray tubes (CRT) for example, in addition to being at risk of becoming obsolete, also degrade with use; their brightness and

colour balance are affected by the deterioration of the tube. We must be mindful of the amount of use a monitor is getting while on view, in the same way, for example, we need to account for the amount of time a watercolour is exposed to exhibition lights.

Installations also depart from the more rigid traditional notions of preservation in that it is not uncommon to see the artist, who is still alive, wishing to re-conceive his work. Preserving the integrity of the piece means preserving its intellectual, aesthetic, and historical integrity, but we must know where to set the boundaries. If an installation was originally created in 1974, for example, and purchased in this form by an institution, would a re-conceived display of the same work today be a reflection of the artist's mindset and creative maturity in 1974 or 2007? We can ask ourselves: Can such works be allowed to change, or will each new re-installation be a new acquisition? This, again, emphasizes the importance of thorough documentation at the moment of acquisition. The same needs apply to artworks which do not enter museum collections. Thorough documentation should be produced every time a piece is installed and taken down; this ensures that the state of a work is recorded through time, while providing valuable information for the care and management of the piece.

With such a great variety of unresolved problems, ethical choices, and unpredictability, conservators must stay alert and open minded in order to find viable solutions. It is too easy for professionals trained to deal with visual material to dismiss or overlook the importance of audio or spatial components. All of these elements affect the viewer's experience and therefore the impact of the work. Because with time-based media installations the artwork often is the experience, this is what we must preserve. Success, then, is the ability to continue to display these works in accordance with the artist's intent.

Conservation Strategies

The following conservation strategies were suggested in the approach developed by the Variable Media Network. Initiated by a collaboration between the Solomon R. Guggenheim Museum (New York) and the Daniel Langlois Foundation for Art, Science, and Technology (Montreal), this project aimed at "sharing information and directly involving the communities and institutions concerned with preservation."

Storage has been the default conservation strategy for museums between the 18th and 20th centuries but it is now proving to be too limited for 21-st century needs. It entails keeping all the original objects and conserving them in their original form for as long as possible. Figure 6 shows a great example of storage, with a view of Nam June Paik's Broome Street studio. This option is still useful but only short to medium term storage can be viable because of budget restrictions and the problem of obsolescence. For example, Nam June Paik was most concerned with preserving the original look and feel of his pieces. For *TV Garden*

(Figure 7), originally created with CRT monitors, even if the monitors were stored - and that could be at high costs - they would not be able to operate for many years. One solution would be to store empty monitor casings and dissimulate new screens inside when exhibited in the future. The same is true for encoded information; just think of precious documents many people still have trapped onto floppy discs at home. It is pointless to preserve components in original formats if the machine to decode the signal is no longer available.

Migrating an artwork is to upgrade its medium to a contemporary standard, which can change the look and feel of the



Figure 6. Nam June Paik's Broome Street Studio, NYC, 1999 ©David Heald

Figure 7. Nam June Paik, *TV Garden*, 1974, 1982 installation at the Whitney Museum of American Art ©The Estate of Peter Moore



work. Despite this drawback, it is a necessary operation when encoded information is brought into museums. The only way known today to avoid the loss of material due to obsolescence is always to keep the media on a current format. This is a critical necessity for masters acquired by institutions. Migration can also serve as a preventive conservation tool; regularly transferring video signal onto new stock can overcome problems with material deterioration. An example where this strategy would incur much loss of meaning would be in the case of a slide projection where the projector, with its characteristic sound and visuals, was a prime element of the installation. A completely different work would result from a migration to digital format.

Emulation is seen at the moment as one of the most promising conservation strategies for time-based media installations. To emulate is to devise a way of imitating the original look of an artwork by completely different means. In the case of hardware, it is rebuilt to imitate the impression conveyed by the original work. Replacing cathode-ray tubes by new screens in original casings, as mentioned earlier, falls under this category.

Finally, there is reinterpretation. This last strategy takes the greatest liberties with the original. A quite radical solution, it consists of reinterpreting the work each time it is re-created, applying the concept of the work to contemporary time and place. It can of course be a dangerous technique when not warranted by the artist but might be the only possible way to show certain performances or installations. Another type of reinterpretation can be seen with open source art. For instance, Cory Archangel has created artworks by hacking into old Nintendo game cartridges. *I Shot Andy Warhol* is based on the light-gun game Hogan's Alley, on which Archangel has changed the graphics. The artist releases his code on the internet and invites users to build their own games by altering the code. This is all part of his creative process, as

he feels it is important to give back, because everything he learned about programming came from homebrew culture.

The Road Towards New Standards: International Collaborative Projects

Four international collaborative projects aiming at developing new preservation strategies for time-based media artworks will now be presented: The Documentation and Conservation of the Media Arts Heritage project (DOCAM), The Variable Media Network, Media Matters, and Inside Installations. A list of web addresses for these projects and for online resources can be found at the end of this text.

DOCAM

In addition to working with the Guggenheim, the Daniel Langlois Foundation has also formed its own research alliance, and the Documentation and Preservation of the Media Arts Heritage project was created in 2005. This five-year project set out to conduct multidisciplinary research to address the problems of preserving technological art heritage not only in the field of visual arts, but also performance art and architecture. Reaching out to museum professionals, academic researchers, technologists, and students, the project promotes a transfer of knowledge, in part through national and international conferences, and is also very active in the Canadian academic scene in Quebec and Ontario. Each year, several research assistantships are granted to graduate students, who in turn may be involved with the different research committees. A very rich semester-long graduate seminar was also developed by DOCAM and has been taught in two major universities in Montreal.

The ultimate objective of the project is to produce tangible, lasting results such as the implementation of new university programs and a series of new tools, like a bilingual thesaurus, a technological timeline, a catalogue structure adapted for works of art with technological components, and a best practices guide for “key stakeholders.”

The Variable Media Network

The Variable Media Network, from which we have already seen the four proposed strategies, argues in favour of new defining terms for media art. Many contemporary artists tend to not limit themselves to one single medium in the creation of an artwork. The use of familiar categories such as film, photography, and video would therefore be too restrictive. To overcome this boundary, a medium-independent classification was created in which descriptions of works of art are mutually compatible; these descriptions are referred to as behaviours. This entails that rather than solely looking at physical components, we evaluate how these components produce meaning — how an artwork behaves regardless of its medium. It also offers the possibilities to document precisely less tangible elements of installations.

The Variable Media initiative also developed its own form of the artist’s interview, the Variable Media Questionnaire. It is an “interactive form linked to a database used to establish curatorial and conservation guidelines for variable media

art.” While not meant to be exhaustive, it is intended to spur questions which must be answered in order to capture the artists’ desires about how to preserve their work once the original medium has expired. In a certain sense, it serves as an ethical will.

Media Matters

Media Matters, formed by teams from the New Art Trust, MoMA, SFMOMA, and the Tate, aims at “establishing best practice guidelines for the care of time-based media works of art.” The project recognizes that the installation of these pieces requires new skills and areas of collaboration between institutions, and wants to raise awareness of these requirements while providing practical resources to answer the need for agreement among museums worldwide. Started in 2003, it is a two-phase project: Phase one addressed issues related to the loan-in/loan-out process, and a set of guidelines and templates was produced and made accessible to institutions and to the general public through the Tate’s website. Phase two, focuses on the acquisition process. The deliverables, which are hoped to be up on the website at the end of 2007, are again templates. A frequently asked questions section will also be included to initiate a dialogue, facilitate communication, and take care of any overlooked issues. Special emphasis in this phase is placed on the documentation of pieces at the moment of acquisition.

Inside Installations

Inside Installations: the Preservation and Presentation of Installation Art, a European funded three-year project initiated in 2004, is based on 30 case studies. The central question is: “How can we best safeguard these expressions of contemporary visual culture [here meaning installation art in general] so that they can be experienced by future generations?” Because at present time there are no agreed standards for the care and management of installation art, and because different stakeholders may have varying views about what defines successful conservation in these cases, this project also wants to develop tools and guidelines for good practice. For example, installation guidelines may be accompanied by step-by-step photographs and continuous films in accelerated motion, of the setting-up and dismantling of the installation.

As with the previous three projects presented in this section, the results from Inside Installations are intended to be shared with the conservation community through the project’s website and a series of seminars, which are entirely available online for viewing in the online events section of the Tate’s website.

Conclusion

The quest for solutions must be a collective effort; we have to engage in interdisciplinary collaboration in order to devise viable new strategies, find answers, even if temporary, and eventually develop standards. The need for communicating experience and information seems obvious since conservators who are confronted with the same problems are responding in quite different ways. This is why most proj-

ects suggest the elaboration of networked databases for art created with non-traditional materials, tools, and technologies. Conservators have to be open-minded and seek and accept the guidance of artists. It is crucial for museums and collectors to understand what is important to the presentation and conservation of an artist’s work. And above all we must thoroughly document the pieces by all means possible ...and not omit to make hard copies as well. If time is the matter out of which these works of art are created, it is also, paradoxically, the main factor causing their loss.

“Everybody can make this piece, but I sign.
When I die, it is your problem to find out which is original.
You have two originals: one piece and a better quality copy.”

-Nam June Paik

ONLINE RESOURCES

A short selection of useful online resources :

DOCAM: www.docam.ca

Click on Resources for a comprehensive list of categorized online resources

The Variable Media Network: www.variablemedia.net

Media Matters: www.tate.org.uk/reserach/tateresearch/majorprojects/mediamatters

Inside Installations: www.inside-installations.org and www.tate.org.uk/research/tateresearch/majorprojects/inside_installations.htm

International Network for the Conservation of Contemporary Art (INCCA): www.incca.org

Netherlands Media Art Institute: [Montevideo/Time-BasedArts: www.montevideo.nl/en/](http://Montevideo/Time-BasedArts)

Tate Online Events: www.tate.org.uk/onlineevents/

This work was first presented at the 2007 ANAGPIC Annual Student Conference hosted by the Harvard University Art Museums Straus Center for Conservation and Technical Studies.

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UV and Visible Light Filtering Window Films

by Samantha Springer

Introduction

UV-filtering window films are flexible films that adhere to glass and block ultraviolet and visible light to varying degrees. In the past decade there has been a great increase in the number of manufacturers producing these films and in the variety of films that are available. Films that filter mainly ultraviolet light are clear (usually with a slight yellowish cast when viewed on edge), while to filter visible light the film must be tinted or coated. The majority of films available now nearly eliminate ultraviolet radiation making the choice between suppliers more dependent on the options available and reputation of the supplier. Elimination of ultraviolet light is typically stated as 95-99% or better in the range of 200 to 380 nm. (The 380 to 400 nm range is often not included in the manufacturer's range and, therefore, not accounted for in their data.)

This report summarizes the evaluation of UV and visible light filtering films for possible use as part of the multi-tiered system for controlling natural light from the almost 250 windows and doors at the Winterthur Museum.

How UV-Filtering Window Films Work

Window films are typically laminated polyester film layers modified with material that absorbs, scatters, or reflects ultraviolet and visible light (see figs. 1 and 2). Most often films are impregnated with dyes or carbon particles or coated with a layer of magnetic sputter vapor deposited metal to accomplish the desired results. Metallic coatings, usually aluminum, reflect incident light, thereby reducing the transmission of UV and visible light. Metallic coatings also create a reflective mirror-like surface from the exterior that is usually deemed unacceptable for historic house museums.

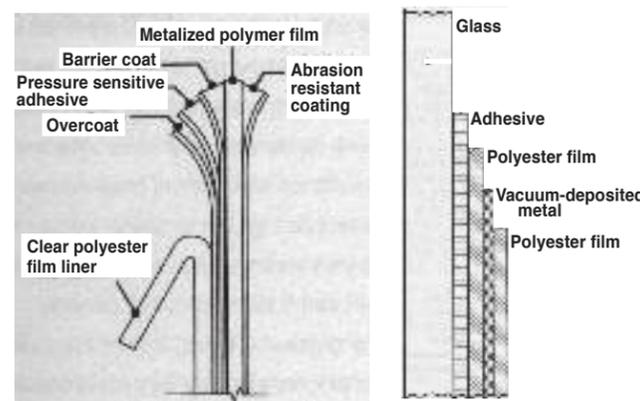


Figure 1 (left): Schematic diagram of a typical reflective solar control film. Films without vacuum-deposited metal layer often still have a lamellar structure. (Image from Horie.¹)

Figure 2 (right): Schematic diagram of the laminated structure of a 3MTM adhesive film. Image from 3MTM marketing information.

Non-metallic window films contain organic UV-absorbing compounds to prevent UV light from penetrating the window. Various organic molecules are capable of absorbing UV energy and converting it to heat, which is harmless to polymers. Although not harmful to the window film, the heat, when combined with the heat absorption of dark tinting, can be enough to stress glass and cause cracks and breakage.

The four most important groups of UV absorbing compounds (see fig. 3) include: hydroxyphenyl benzotriazoles; hydroxyphenyl-s-triazines; oxalanilides; and 2-hydroxybenzophenones. Of these compounds, the most widely used in polymers is 2-(2-hydroxyphenyl)-benzotriazole. Because the specific compound used is usually considered proprietary information, it is difficult to ascertain what compounds are present in contemporary products. The transmission curves for the known compounds (see fig. 4), however, explain why films often do not eliminate ultraviolet light in the 380-400 nm range.

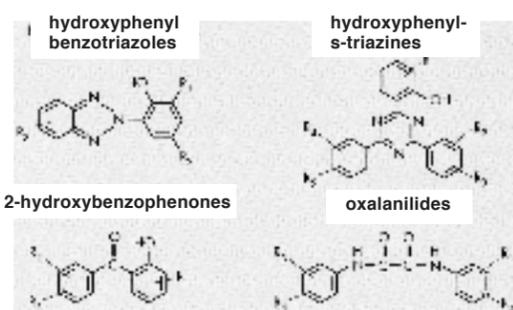


Figure 3: Structures of organic UV absorbing materials. (Image from Valet.²)

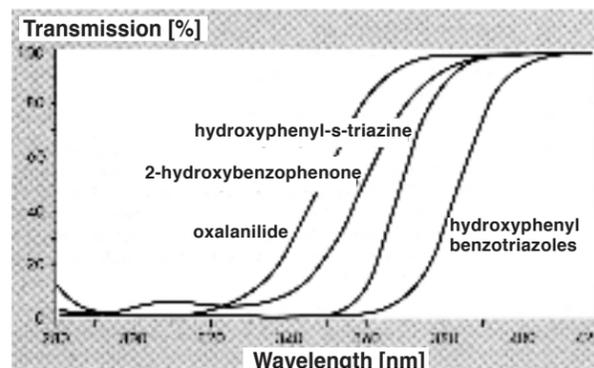


Figure 4: Transmission spectra of different UV-absorber groups. (Image from Valet.²)

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The base or film is most commonly polyester, or Mylar sheet, although acetate, and, less preferably, vinyl chloride have been used. The films come in different thicknesses, but the most common is 2 mils., with thicker films being used for security applications and as roller shades. As illustrated above, the films are often thinner layers laminated together to make the desired thickness. This type of construction adds to their strength. The UV absorbers can be built into the film base, coated on the film, or applied in the adhesive. The last two types of application are less desirable, because uniformity and quality is harder to control.

For the most part, window films are applied to the interior window surface. There are films made for exterior application, but they tend to be more expensive and guaranteed for about half the amount of time. This is because they are prone to peeling due to exposure to the elements. Interior films are generally guaranteed for 10-15 years. Some films are sold as do-it-yourself kits, but the majority of companies only offer a warranty with professional installation, because complete and even adhesion is so critical to their effectiveness.

The majority of films are installed by dissolving a water-soluble barrier over the adhesive with an aqueous solution (see fig. 2), applying the film to the glass, and then removing excess water and air bubbles with a squeegee. It can take from a week to a couple of months for the films to completely dry and harden. During this period the film bonds to the glass, becoming less reversible with time. Some 3M products are applied with a pressure sensitive adhesive, developed and made by the same company.

It is widely recommended that these types of films not be applied to old and historic glass, including crown glass, glass with a highly irregular surface, stained or dark colored glass, or glass with many air bubbles or inclusions. It can be difficult to achieve adequate adhesion to irregular surfaces, but even more significant is the issue of reversibility without damaging the glass.

Films can be removed with solvents, such as paint strippers, ammoniated solutions, or odorless thinners. The solvents required, however, have associated health hazards and can be damaging to historic paint or wood trim. Metal scrapers can also be used to remove the films; risk of scratching or breaking the glass, however, is usually high. In addition, tinted films can cause damage to the types of glass listed above, because of the heat gain.

To summarize, the pros and cons of window films are:

- + they come in a wide variety of options, increasing the probability of finding a suitable product to eliminate UV and a specific amount of visible light;
- + most films nearly eliminate ultraviolet light;

- + there are non-reflective/metallic options that can also reduce glare on the interior, making it easier for visitors to see inside;
- + they can be applied to interior windows, storm glass, or used as roller blinds;
- + they can be cut and fitted to each individual pane of glass, making them practically invisible from the interior and exterior;
- + the polyester film base is a stable and durable material;
- + they have the potential to last much longer than their guaranteed life of 10-15 years, however, no studies have been done on their aging properties;
- + there are a number of manufacturers and distributors to choose from;
- + most of the manufacturers have various local suppliers/installers;
- + in addition to limiting the transmission of visible and ultraviolet light, they provide safety features (e.g. reduced breakage in heavy storms) and reduce solar heat gain and heat loss, which can reduce energy costs.

- they are not easily removed;
- solubility of the adhesive decreases over time;
- they should not be applied to historic glass;
- they are only guaranteed for 10-15 years, which means replacement will be necessary, so these costs must be factored into the decision;
- due to the nature of the material, they often do not eliminate light in the 380-400 nm range of the ultraviolet spectrum, however, new evidence suggests that this is no longer the case;
- the long-term stability of the light absorbers in the films has not been tested extensively—it should be noted that the adhesive will likely fail before the UV absorbers—advances in adhesive technology, however, may change this in the future;
- heavily tinted films can cause irregular or excessive heat build-up, which may in turn cause cracks and breakage due to uneven expansion of the glass;
- windows with the films must be cleaned carefully to avoid scratching or causing cloudiness of the film—this could become problematic if they are only in a few areas and housekeeping crew are not reminded of their presence as they are different from the norm;
- manufacturers can change their product without warning, so it is always necessary to check that the product meets its specifications;
- manufacturers can go out of business, merge, or change their focus, making it necessary to reevaluate the products available, which can be time consuming and costly (this is particularly relevant with a product that only has a ten-year warranty).

UV and Visible Light Filtering Window Films, continued

Evaluation of UV-Filtering Window Films

Two studies, Craft and Miller (2000) and National Park Service (NPS) (2001), have reported on the effectiveness of these types of films. Both studies measured the UV transmittance as a gauge of the film's efficacy. Craft and Miller measured the % transmittance and to which wavelength the filter was effective, while the NPS measured visible light in footcandles and ultraviolet in microwatts/lumen. These types of measurements can be taken with a handheld light meter by completely covering the sensor with the filtering material. This measurement can then be divided by the amount of light measured without the filter to obtain the % transmittance.

When evaluating the window films with this method several factors must be kept in mind. Fluorescent or tungsten light sources do not emit the same amount of energy throughout the spectrum as sunlight, which may affect the accuracy of the readings. In addition, light meters do not measure light evenly throughout the spectrum. For example, the UV meter used in this study has a high response to light around 310 nm and its response falls off below 380 nm (see fig. 5).

Typical spectral response

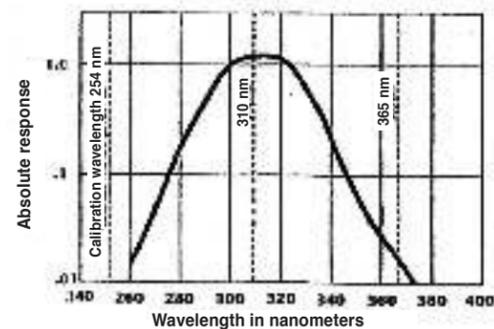


Figure 5: Spectral response curve of the UV-300 Ultraviolet Monitor meter. It has its greatest sensitivity at 310nm and does not measure in the infamous 380-400nm range. (Image from product literature.)

This indicates that readings are not comprehensive, because the meter is measuring mainly the wavelengths that the window films absorb. This is the most significant point of inaccuracy in this type of measurement.

Another method of measuring the absorbance, from which the transmittance can be calculated, is by using a UV/VIS spectrometer. The UV/VIS spectrometer provides data across the full spectrum of UV and visible light energy (200-800nm). Using this type of instrumentation would indicate regions of maximum and minimum absorption and how well the films absorb at each specific wavelength relative to one another. In addition, the spectra can be compared to roughly compare the films' effectiveness.

For this study, initial measurements were taken of the UV films to identify any egregious inconsistencies in the manufacturer's data. Afterwards, films that met the criteria for this project were evaluated with the UV/VIS spectrometer. Table 2 contains data collected from the window film samples obtained from various prospective suppliers. Visible light readings were taken with the Mannix DLM2000 Digital Light Meter in lux, and UV light readings were taken with the UV-300 Ultra Violet Monitor meter in mW/m². All readings were taken in a room with overhead fluorescent and tungsten lights, and with some daylight through windows fitted with UV filters. The % transmittance and rejection were obtained by dividing the reading through the film by the control reading. The control was taken with the meter's sensor fully exposed to the ambient light.

The Vista, LLumar, and Madico films tested with the light meters were consistent with the manufacturer's specifications. Readings from the Global Window Films and 3M films indicated a discrepancy from the manufacturers' ultraviolet light specs. The 3M films measured a % rejection of ultraviolet light between 30-99% for films that the manufacturer reported a 99% rejection. Some of the films from Global Window Films measured as low as 83% rejection for films that the manufacturer states a 98-99% rejection. Because of this amount of inconsistency these films were judged inadequate for the requirements of most museums.

The discrepancy could be due to the fact that some of the ultraviolet absorbers are present in the adhesive, which was not on the film samples that were tested. However, even if there are additional UV absorbers in the adhesive, those films remain inadequate because that type of adhesive is undesirable. As was mentioned earlier, it is more desirable to have the UV absorbers dispersed through the film material. These results are also a reminder that the quality of any product should be tested periodically, for example, whenever a new order is placed.

Discrepancies also occurred in visible light % transmittance for all of the window films. This could be caused by a number of factors, such as: some manufacturers' specs are given for the film adhered to a pane of clear glass, while test readings were taken of the film alone; the manufacturer's specs could have been measured with a different type of meter; and a range of variation is accepted by manufacturers of the films and the industry.

In actual use, the films are applied to a single pane of glass, so more accurate test readings could have been achieved by placing the film over glass. The sample films, however, were not received with any adhesive on them and testing them over glass without the adhesive would likely have produced greater inconsistency because of air trapped between the two materials.

The films that met the necessary criteria were then tested with the UV/VIS spectrometer for a more accurate evaluation. A representative sample of the resulting spectra are

Manufacturers Specifications versus Measured Readings

Manufacturer Film Name	Visible Light		UV Light		Notes
	Manuf. Specs %T	Measured Lux/ %T	Manuf. Specs % Rejected	Measured mW/m ² / %Rejected	
Clear Glass No Film	83	2330	N/A	30.0	
Control* No Film	100	2570	0	34.3	
Madico CLS-200-XSR Clear	77	2290/ 89	100 (<380 nm) 99 (380-400 nm)	0.02/ >99	Comes in a variety of thicknesses.
Madico Neutralux NG-20	13	270/ 11	99	0.05/ >99	
Madico Neutralux NG-35	36	910/ 35	99	0.32/ 99	
Madico Neutralux NG-50	43	1260/ 49	99	0.38/ 99	
Madico Neutralux NG-70	64	1864/ 73	99	0.55/ 98	
Madico Insulux SG-220	24	590/ 23	99	0.16/ >99	Possibly metallic appearance.
Madico Insulux SG-330	32	1063/ 41	99	0.33/ 99	
Madico Insulux SG-550	50	1480/ 58	99	0.32/ 99	
Madico Neutralite TSG-335	40	1513/ 59	99	0.32/ 99	
Madico Neutralite TSG-550	45	1260/ 49	99	0.03/ >99	
Madico Sunscape Designer Gray DG-35	38	966/ 38	>99	0.56/ 98	
Madico Sunscape Designer Gray DG-45	42	1219/ 47	>99	0.68/ 98	
Madico Sunscape Designer Gray DG-55	51	1340/ 52	>99	0.96/ 97	
LLumar UV CL-SR PS Clear	84	2280/ 91	99.9	0.02/ >99.9	
LLumar NUV SR PS4 Neutral	63	1850/ 72	99.9	0.00/ >99.9	
LLumar N1065 SR CDF	71	1840/ 72	99	0.41/ 99	
LLumar N1050 SR CDF	50	1344/ 52	99	0.27/ 99	
LLumar N1040 SR CDF	41	1120/ 45	99	0.30/ 99	
LLumar N1020 SR CDF	24	640/ 25	99	0.10/ >99	
LLumar DR 35 SR CDF	36	1020/ 40	99	0.62/ 98	On double strength clear glass.
LLumar DR 25 SR CDF	22	743/ 29	99	0.56/ 98	On double strength clear glass.
LLumar DL-15 G SR CDF	16	414/ 16	99	0.06/ >99	
Vista Window Film Celeste (V-18 SR CDF)	18.0	534/ 21	99.9	0.01/ >99	
Vista Window Film Luminance (V-28 SR CDF)	27.0	788/ 31	99.9	0.03/ >99	Possibly metallic appearance.
Vista Window Film Soft Horizons (V-33 SR CDF)	33.0	880/ 34	99.9	0.01/ >99	
Vista Window Film Mirage (V-38 SR CDF)	37.0	970/ 38	99.9	0.03/ >99	
Vista Window Film Dayview (V-45 SR CDF)	45.0	1176/ 46	99.9	0.03/ >99	
Vista Window Film Crystal Elegance (V58 SR CDF)	58	N/A	99.9	N/A	

Manufacturers Specifications versus Measured Readings

Manufacturer Film Name	Visible Light		UV Light		Notes	
	Manuf. Specs %T	Measured Lux/ %T	Manuf. Specs % Rejected	Measured mW/m2/ %Rejected		
3MScotchshield SCLARL400	86	2220/ 86	98	24.2/ 30	All films applied with pressure sensitive adhesive which may account for the discrepancy in UV transmittance.	
3M Scotchshield S50NEAR400	51	1320/ 51	99	14.89/ 56		
3M Scotchshield S35NEAR400	37	943/ 37	99	9.02/ 74		
3M Scotchtint HP PNTHR50 Light	56	1400/ 54	99	0.33/ 99		
3M Scotchtint HP PNTHR35 Medium	37	958/ 37	99	0.30/ 99		These films had up to 68% difference between the measured values and manufacturer's specs.
3M Scotchtint Sun Control RE7ONEARL	66	1780/ 69	98	21.4/ 38		
3M Scotchtint Sun Control RE5ONEARL	51	1401/ 54	98	17.4/ 49		
3M Scotchtint Sun Control RE35NEARL Medium	37	986/ 38	99	12.5/ 64		
3M Scotchtint Sun Control RE2ONEARL	16	430/ 17	99	4.3/ 87		
3M Scotchtint Sun Control NV-35	35	914/ 36	99	10.1/ 71		
3M Scotchtint Sun Control NV-25	24	670/ 26	99	7.2/ 79	Appears slightly metallic.	
Control** No Film	100	2510	0	33.8		
Global Window Films UV Clear	89	2290/ 91	99	0.06/ 99.9	These films had up to 17% difference between the measured values and manufacturer's specs.	
Global Window Films Sungate Crystal 50	52	1480/ 59	99	1.21/ 96		
Global Window Films Sungate Crystal 35	42	1160/ 46	99	1.09/ 97		
Global Window Films Sungate Crystal 20	21	580/ 23	99	5.05/ 85		
Global Window Films Sungate Alox 50	55	1440/ 57	99	1.24/ 96		
Global Window Films Sungate Alox 35	36	1147/ 46	99	0.90/ 97		
Global Window Films Sungate Alox 20	25	754/ 30	99	5.68/ 83		
Global Window Films Estate Neutral 65	63	1717/ 68	99	1.15/ 97		
Global Window Films Estate Neutral 50	50	1497/ 60	99	0.99/ 97		
Global Window Films Estate Neutral 35	37	1035/ 41	99	0.92/ 97		
Global Window Films Estate Neutral 20	21	675/ 27	99	0.53/ 98		
Global Window Films Estate Dual Reflective 40	40	1108/ 44	99	0.93/ 97		
Global Window Films Estate Dual Reflective 30	29	839/ 33	99	0.68/ 98		
Global Window Films Estate Dual Reflective 20	16	508/ 20	99	0.37/ 99		

* This control reading was used to calculate the % transmittance and rejection for all films, except those from Global Window Films. The measurements were all taken within a two hour period of the control.

** This control reading was used to calculate the % transmittance and rejection for the Global Window Films. The readings were all taken within one hour of the control.

UV and Visible Light Filtering Window Films, continued

given in Appendix B. (For the results of all tests, please contact the author.) These films were:

- Madico CLS-200-XSR Clear,
- Madico Neutralux NG-20,
- Madico Neutralux NG-70,
- Madico Neutralux NG-35,
- Madico Insulux SG-330,
- LLumar Clear UV CL-SR PS Clear,
- LLumar N1065 SR CDF,
- LLumar DL-15 G SR CDF,
- LLumar DR 25 SR CDF,
- LLumar N1020 SR CDF.

The Vista films were not tested, because they did not have enough options to meet the visible light transmittance criteria.

Most of the films had a similar absorbance pattern with an even absorbance through the visible region, a spike around 400 nm, and then a drop around 300 nm. This information indicates that previously reported problems with lack of absorption in the 380-400nm range have been remedied. In addition, it should be noted that clear glass absorbs UV in the 200-300 nm range, making it unnecessary for the films to absorb as intensely in this range as they do in the 300-400 nm range. Two of the LLumar films did absorb the light evenly through the visible region. This indicates that they are not truly a neutral grey color. In fact, they appeared slightly bronze to the author, although they are advertised as neutral.

Summary and Recommendations

The evaluation of the window films established that several of the manufacturers produce suitable films for application in a museum. The 3M and Global Window films were found to be below the acceptable standards; in both cases the measured % rejected ultraviolet was well below the manufacturers specifications and museum requirements of 99%. Looking at other criteria, the remaining manufacturers appear somewhat equal. Of the remaining, both Madico and LLumar make a broad enough variety of films to match the required tinting strengths necessary at Winterthur.

Conservators at the Freer and Sackler Galleries and the Colonial Williamsburg Foundation and the director of operations at the Delaware Art Museum were consulted about window films that were recently installed at each of their respective museums. In each case, the films were applied to modern glass and only one type of film was needed. A Madico product was used at the Freer and Sackler Gallery, a LLumar product at the Colonial Williamsburg Foundation, and a Vista product at the Delaware Art Museum. In each of these cases, the museums had different criteria to be met than those at Winterthur.

The films that matched the criteria for the needs at Winterthur were tested with the UV/VIS spectrometer. The results from these tests found all of the films to have adequate absorption in the UV range. Two of the LLumar films, DL-15 G SR CDF and DR 25 SR CDF, were found not to be truly neutral in color. On the comparison spectra the Madico

films appear to slightly outperform the LLumar products. The testing carried out in this study has shown that there has been a significant improvement in the manufacturing of UV and visible light filtering window films. With the appropriate evaluation methods it is possible to choose the best product available and avoid the previous disadvantage of films not eliminating UV light from the 380-400 nm range. However, many of the previous pros and cons still exist for deciding whether or not window films are appropriate for use in a particular situation. The overall benefits and disadvantages to window films must always be taken into consideration before choosing them as the solution to mitigating the effects of natural light.

[The recommendations made in this report were made with the information available at the time. A study on the long-term aging properties of the adhesives and UV absorbers used with the films would improve these recommendations.]

Appendix A: Window Film Suppliers

Express Window Films
East coast supplier of Global Express Window Films
82 Mill Plain Road
Danbury, CT 06811
Phone: (800)345-6669
Fax: (203)798-2253
www.filmnow.com

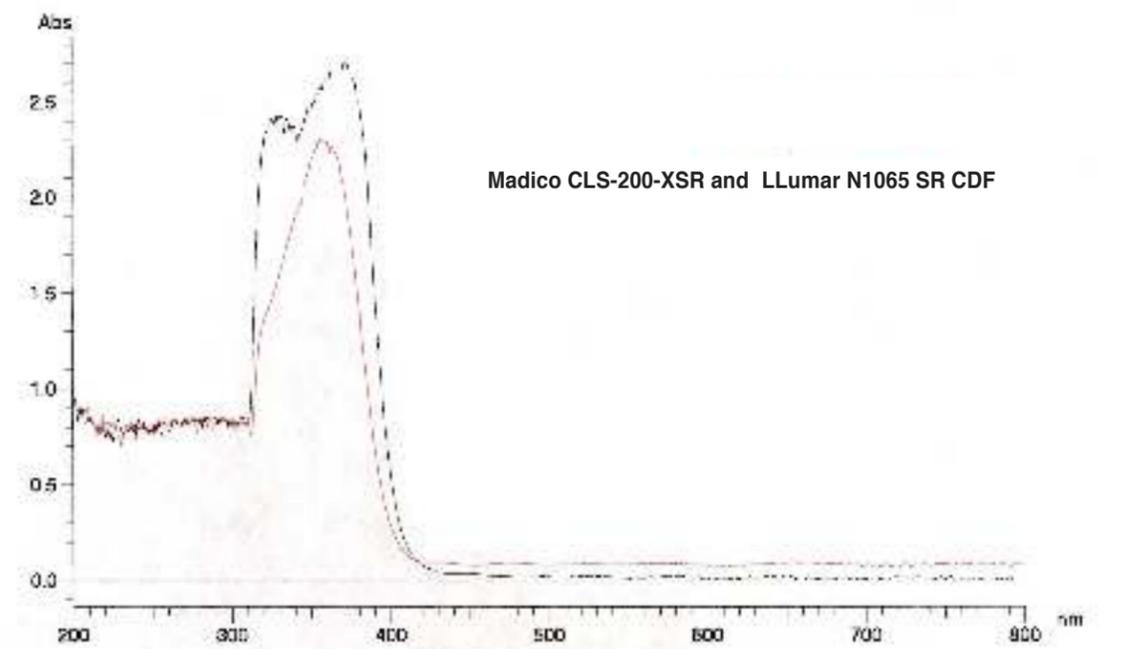
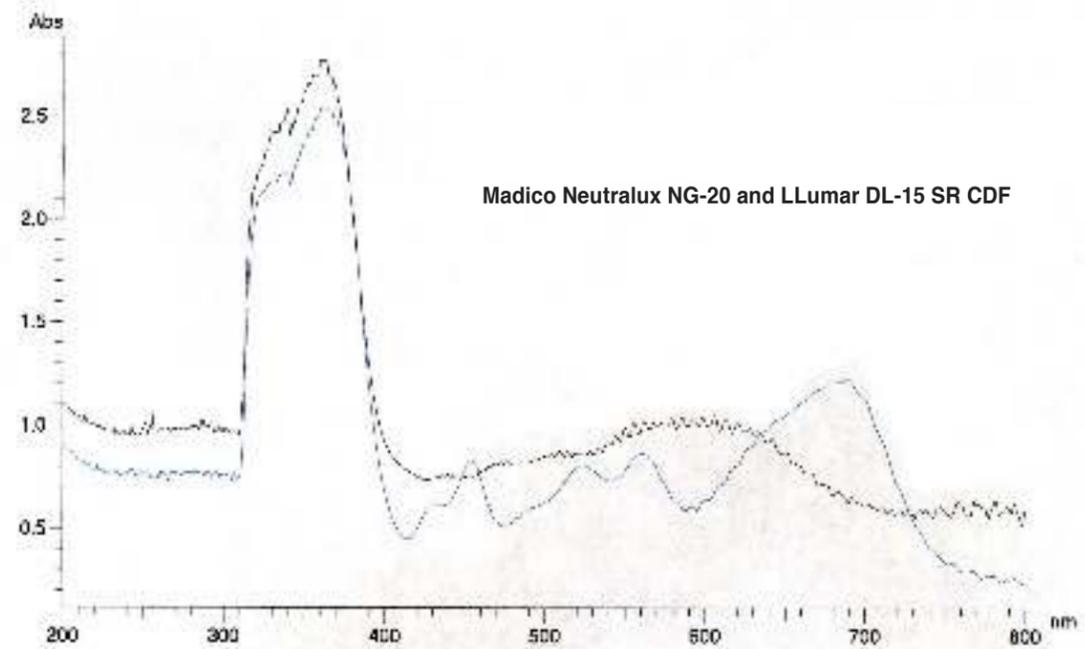
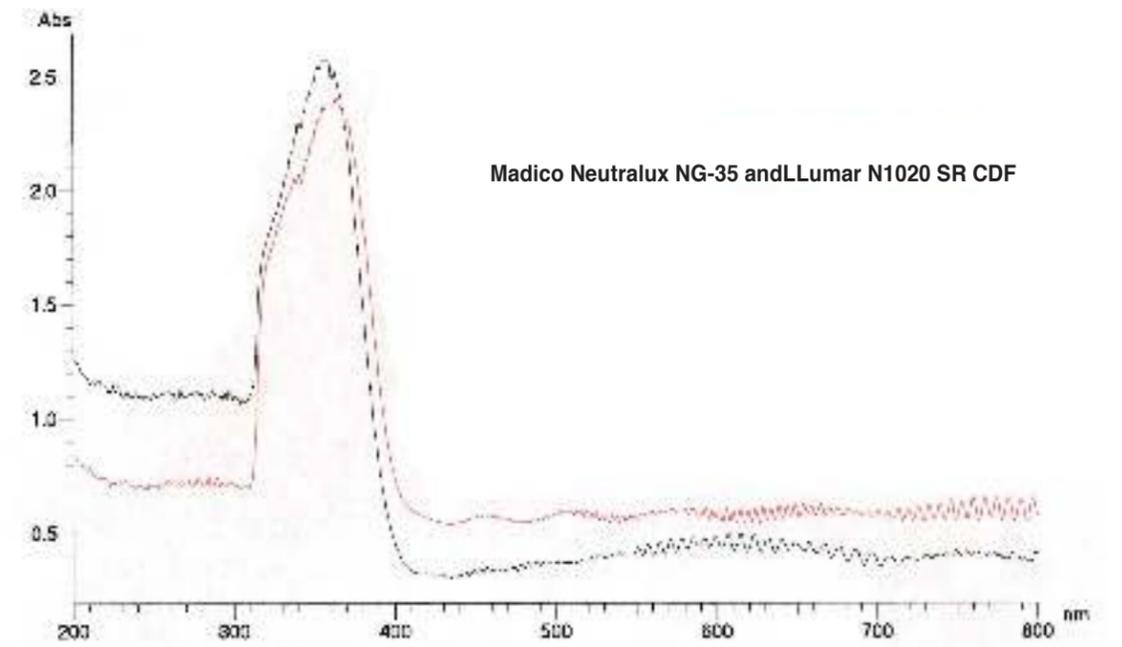
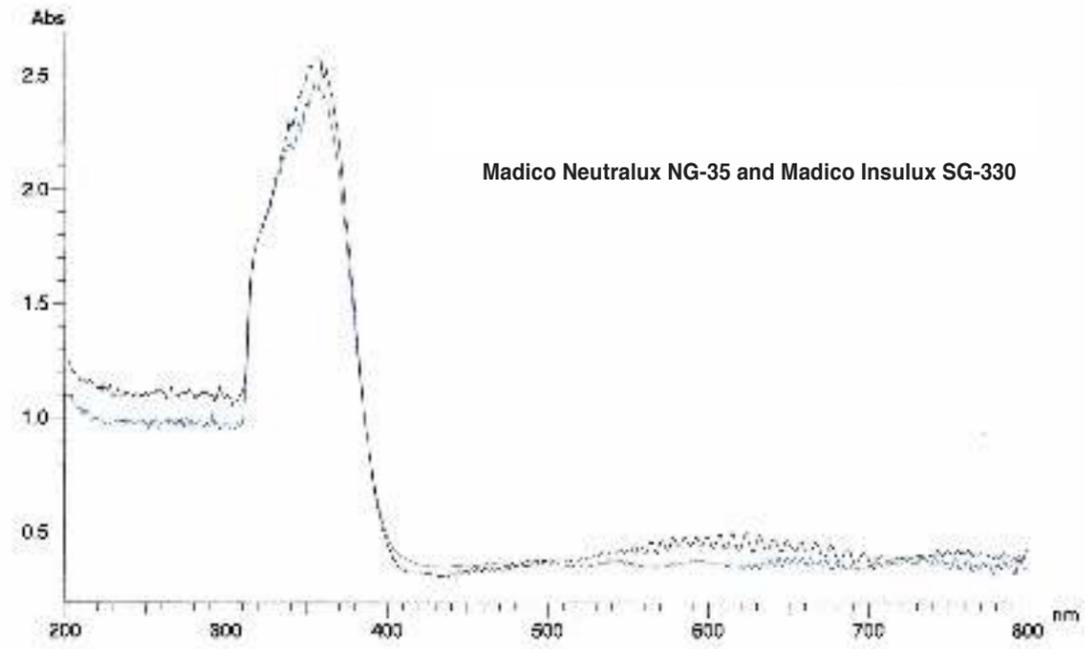
3M™ Scotchtint™ and Scotchshield™ Window Films
Manufacturer of 3M product
Specified Construction Products Dept.
3M Center, Building 207-1W-08 or 225-4S-08
St. Paul, MN 55144-1000
www.3m.com
http://solutions.3m.com/wps/portal/3M/en_US/WF/3MWindowFilms?redirectName=www.3m.com/windowfilm

Madico Window Film
Manufacturer of Madico product
Madico, Inc.
64 Industrial Parkway
P.O.Box 4023
Woburn, MA 01801
Phone: (800)225-1926
Fax: (781)935-6841
www.madico.com

CPFilms Inc. (subsidiary of Solutia)
Manufacturer of LLumar, Gila, Vista Window Films (Gila is a self-installation product)
Corporate Headquarters:
CPFilms Inc.
PO Box 5068
Martinsville, VA 24115
Phone: (276)627-3000
Fax: (276)627-3032
www.cpfilms.com

The spectra for all films tested with the UV/VIS spectrometer and an extensive annotated bibliography are available from the author at samkspringer@aol.com.

Appendix B: Results of Tests with UV/VIS Spectrometer



Articles You May Have Missed

“Battle of Britten Rages on the Beach,” *The Observer*, 1/6/2008

For the people of Aldeburgh, it’s a classic ‘whodunit’. Which disgruntled individual among the 3,000 residents of this genteel Suffolk seaside town has crept out in the night to vandalize an iconic sculpture in honour of Benjamin Britten? Not once, but 11 times.

The problem is that the list of potential suspects is just too long. More than 1,000 locals hate the *Scallop*, the controversial, 12ft high, steel artwork created by artist Maggi Hambling, which has bitterly divided the town since it was erected four years ago. It is not that they do not appreciate the artistic quality of Hambling’s giant steel scallop shells; it is the fact that it is sited on an unspoilt shingle beach in a designated area of outstanding natural beauty.

The £70,000 sculpture, a tribute to the composer who lived and is buried in the town, was first attacked just two months after its unveiling in November 2003. Such was the level of hostility that in 2004 objectors formed a campaign group. But *Scallop* had its supporters, too, who hoped that the four-ton stainless steel work could become East Anglia’s answer to Antony Gormley’s *Angel of the North*. In the end Suffolk Coastal District Council stayed firm, deciding that the beach on which Britten regularly walked was the perfect spot. Two months later it was daubed again, and the attacks have continued at regular intervals.

“We have no intention of removing it from its proud position in Aldeburgh,” said a council spokesman.

“Saving Afghanistan’s Art,” *Time*, 1/8/2008

The Taliban’s dynamiting of the giant Buddhas of Bamiyan in March 2001 was only the most dramatic expression of their mission to obliterate all “idolatrous” images from Afghanistan’s pre-Islamic past. They also destroyed 2,500 other cultural artifacts from Kabul’s National Museum of Afghanistan, many of them priceless. But thanks to the heroic efforts of curators, they didn’t get it all.

Hidden Afghanistan, a traveling exhibit that recently opened in Amsterdam’s Nieuwe Kerk, gives a tantalizing glimpse of Afghanistan’s stunningly diverse cultural legacy, and tells an engrossing tale about how these remnants of it were saved. That anything is left at all is in large part due to the efforts of

museum director Omar Khan Massoudi, his staff, and a small group of concerned archeologists and politicians.

In 1988, they secretly moved the highlights of the collection to a vault in the Central Bank at the presidential palace. Massoudi, who risked his life to preserve his country’s cultural heritage, was one of seven men who had keys to the vault. All seven keys were needed to open it, so by spreading them around and keeping their locations secret they were able to preserve the treasures. It wasn’t until 2003, more than a year after the overthrow of the Taliban, that the Afghan government confirmed the existence of the treasures and restoration work began. Less than one-quarter of the museum’s original collection survived.

Afghanistan is still deemed too unstable for the art to go home, and the museum itself remains badly damaged. So currently this traveling exhibit is the only way Afghans can see the museum’s collection. In May the exhibition will go to Washington to start a 17-month tour of the U.S.

“Broad Won’t Hand Off Art,” *Los Angeles Times*, 1/9/2008

In a sharp reversal of oft-stated intentions, financier and philanthropist Eli Broad has decided to keep his collection of contemporary art instead of giving it to museums, a move likely to be interpreted as a blow to the Los Angeles County Museum of Art. A leading collector of late 20th and 21st-century art, Broad has amassed a 2,000-piece collection under a foundation that functions as a lending library and study center. For years he has said he did not want to establish a private museum and ultimately would distribute the works to other institutions.

His agreement to finance the Broad Contemporary Art Museum -- a \$50-million building opening in February at LACMA -- and to stock it with works from his collections and establish a \$10-million acquisitions fund fueled hopes that the Wilshire Boulevard institution would be a major recipient of art gifts. But the new development turns the Broad Art Foundation into a permanent repository of artworks available to museums around the world.

A longtime advocate of shared collections for cash-strapped museums, Broad characterizes his Santa Monica-based foundation as a new paradigm

and a model for other private collectors. “Museums would all be better off if they shared the costs of insurance and storage,” he said. “We now feel that we can best serve museums by continuing to make accessible a common collection of contemporary art that is shared among many institutions. The foundation will pay for staffing, insurance, storage, and conservation of the work.”

“Florence Pondering New Home for Michelangelo’s David,” *CBC News*, 1/17/2008

Florence is considering a plan to move Michelangelo’s David in an effort to ease crowding in the historic center of the city. The handsome naked youth has stood in the Galleria dell’Accademia in central Florence since 1873, when it was moved inside to protect it from the weather. It is one of Florence’s greatest attractions, and tourists waiting in line to see it congest city streets and leave chewing gum on ancient buildings.

Tuscany’s top cultural official, Paolo Cocchi, has proposed moving the 4.3-metre marble statue to a theatre to be built on the outskirts of the city, near Leopolda Station. It is one of several proposals being made to handle congestion and vibrations that are hurting old structures in Florence. As many as 11 million tourists visit the city annually. The theatre where the David would be moved is not slated to be completed until 2010-2011.

In 1504, it took four days to move David from Michelangelo’s studio to its original home in a downtown piazza. Moving the statue in contemporary times will also be huge logistical exercise due to its weight and value.

“US and Italian Officials Seek Better Collaboration,” *The Art Newspaper*, 1/17/2008

Museum and cultural officials from Italy and the US met at the American Academy in Rome on 28 November to discuss ways to improve future collaboration. The meeting — co-organized by the Clark Art Institute and the Italian Ministry of National Heritage and Cultural Activities — represents a warming of relations between the two countries in the aftermath of the high-profile restitution cases that in the last two years have led to the return to Italy of antiquities held by the Metropolitan Museum, the Museum of Fine Arts Boston, the Getty Trust, and

Susanne Friend, column editor

the Princeton University Art Museum, all of which had been illicitly removed from Italy.

The works went on view in an exhibition at the Quirinale Palace in Rome last month, shortly after the Italian Cultural Ministry and the Region of Sicily dropped most of the civil charges against Marion True, the former curator of antiquities at the Getty, who remains on trial in Rome on criminal charges of receiving looted art, a charge she denies.

A revelation that surprised the Italians is that US museums currently loan many more objects to Italian institutions than the reverse. The imbalance is due in part to Italy’s increasing interest in mounting temporary exhibitions of impressionism, post-impressionism, and modern art, areas in which US museums have extensive holdings.

“Priceless 16th-Century Paintings Disintegrating in a Government Store,” *The Malta Star*, 1/19/2008

Three large priceless, 16th-century lunettes which once adorned two chapels of the Jesuit Church in Valletta have been abandoned for the last year in a government building in Cottonera, exposed to severe conditions of heat and humidity, without any form of protection.

The three semi circular paintings, each measuring about four by two metres, were commissioned in the late 1600s. They are thought to be works of artists from the school of Mattia Preti.

The Infrastructure Minister Ninu Zammit, who is responsible for the restoration of these national treasures, was well aware that they need urgent attention. But Zammit decided to cut short the tendering process half-way. Sources at the ministry confirmed that the decision was taken because the cost involved, possibly in region of 60,000, was considered to be “unaffordable.”

This was the second time that these paintings were abandoned before proper restoration and conservation had been completed. In the meantime, a third lunette, featuring St Lucia’s martyrdom, fell from the wall where it was hanging in the church. Then the inexpert government workers did something which continued to damage the work — they wrapped it up in plastic sheeting, and consequently it got covered in mould and became even more fragile.

“The Artful Codgers,” *National Post*, 1/28/2008

Shaun Greenhalgh, an Englishman whose furtive career has been unfolding in courtrooms, newspapers, and museums for the last three months, may well be the most versatile art forger in history. He can do a convincing Gauguin, an 18th-century bronze portrait, a Barbara Hepworth sculpture, or a broken chunk of Assyrian wall art.

A high-school dropout at 16, Shaun taught himself painting, drawing, stone carving, and several other techniques. Then, with the enthusiastic support of his family, he became an art criminal. Selling the forgeries, Mom and Dad presented themselves as simple folk who had inherited art that their parents or grandparents picked up cheap, long ago.

After many successful years, and scores of sales, the Greenhalghs were caught out by that old devil hubris. Shaun, deeply impressed by his own talent, forgot that serious chicanery requires careful attention to detail. He sent the British Museum what was apparently an ancient Assyrian stone relief showing a soldier and horses with cuneiform writing. It looked great until someone noticed a minor spelling mistake in the writing, and someone else said that the harness on the horses was from the wrong period. The British Museum called Scotland Yard.

Shaun has been sentenced to four years and eight months in jail. Mom got off with a year’s suspended. Dad came to court in a wheelchair, wearing slippers, with a shawl over his legs; he apologized for being partially deaf, due to his Second World War injury. His punishment was delayed because the judge couldn’t find a wheelchair-accessible jail.

“Italy Awaits Biggest ever Trial of Tomb Robbers,” *The Art Newspaper*, 1/28/2008

Operation Ghelas, which has dismantled a major Italian antiquities smuggling operation stretching across Western Europe, will come to a climax in February when 70 defendants are brought before a judge for a preliminary hearing in Gela, southwest Sicily.

The investigation, carried out by the Italian Cultural Patrimony Protection (TPC) squad, concluded last summer with an unprecedented 85 indictments and 52 arrests — the biggest bust ever of

the tombaroli (“tomb raiders”). Government officials, teachers, and plumbers are among the suspects. Fifteen have already pleaded guilty to various charges, among them carabinieri Carmine Maschio, who admitted to driving loot across the Swiss-Italian border.

More than 2,000 antiquities were recovered, such as amphorae, statues, and coins from major archaeological sites in Sicily, including Morgantina, Syracuse, Selinunte, and Gela, as well as in Puglia and Lazio. The “four-celled” network of international collaborators distributed stolen antiquities through intermediaries in Switzerland, Germany, Spain, the UK, and the US, including Munich’s Gorny & Mosch auction house.

“Artist’s Widow Fights to Save Husband’s Work,” *Los Angeles Times*, 02/03/2008

Artist Nancy Holt, the widow of artist Robert Smithson, is encouraging the arts world to protest plans for exploratory oil drilling in Utah’s Great Salt Lake that may have an effect on her late husband’s 1,500-foot-long, 15-foot-wide environmental artwork *Spiral Jetty*.

The giant “earthwork,” built in 1970 of mud, salt crystals, basalt rocks, and water on the northeastern shore of the Great Salt Lake, near Rozel Point, is considered perhaps Smithson’s most important work. Subject to the rise and fall of the lake water level, the work was submerged for three decades, re-emerging in 1999.

After being notified last week of the drilling plan by Lynn DeFreitas, director of the group Friends of the Great Salt Lake, Holt blasted a group e-mail to artistic colleagues urging them to send letters of protest “to save the beautiful, natural environment around the Spiral Jetty.” John Harja, director of the governor’s public lands office for the State of Utah, said his office had received roughly 160 e-mails from all over the world. He said the office had extended its deadline for public comment to Feb. 13.

“T-Rays Reveal Hidden Art Harmlessly,” *Discovery News*, 2/7/2008

Scientists from the University of Michigan are using T-rays, a benign form of electromagnetic radiation, to see artwork hidden for centuries by paint or plaster. T-rays have been around for decades and used for everything from space shuttle foam analysis to poison detection.

Articles You May Have Missed, continued

But this is one of the first times they have been used in the art world.

The researchers plan to apply the technology next month to find murals hidden beneath layers of plaster in centuries-old churches in France. Unlike energetic and potentially harmful X-rays, T-rays, or terahertz rays, are completely benign to living things. Since many paint dyes are organic, and thus susceptible to X-rays, T-rays are better for imaging artwork because there is no risk of damaging the piece.

The new technique should be able to detect particular dyes in old artwork, such as sanguine, a reddish-brown color that Flemish painters often used. To generate T-rays, the scientists shoot a special laser beam into an electromagnetic field. Different wavelengths of T-rays are absorbed or reflected by different materials. By looking at when and which wavelengths are reflected or absorbed, researchers see what a piece of artwork is hiding.

“Oldest Oil Paintings Found in Afghanistan,” *Discovery News*, 2/19/2008

The oldest known oil painting, dating from 650 A.D., has been found in caves in Afghanistan’s Bamiyan Valley, according to a team of Japanese, European, and U.S. Scientists. The discovery reverses a common perception that the oil painting, considered a typically Western art, originated in Europe, where the earliest examples date to the early 12th century A.D.

Damaged by the severe natural environment and Taliban dynamite, the cave murals have been restored and studied by the National Research Institute for Cultural Properties in Tokyo, as a UNESCO/Japanese Fund-in-Trust project. Painted in the mid-7th century A.D., the murals have varying artistic influences and show scenes with knotty-haired Buddhas in vermilion robes sitting cross-legged amid palm leaves and mythical creatures.

Three different centers -- Tokyo’s National Research Institute for Cultural Properties, the European Synchrotron Radiation Facility in France, and the Los Angeles-based Getty Conservation Institute -- carried out the tests. A particular group of caves were painted with oil painting technique, using perhaps walnut and poppy seed drying oils. They also have multi-layered structure

as if they were like canvas paintings of the Medieval period.

Synchrotron beam analysis made it possible to identify the compounds used in the different layers of painting. Analysis showed the layers were made up of natural resins, proteins, gums, oil-based paint layers and, in some cases, a resinous, varnish-like layer.

“Monet Painting in Cologne Museum Found to be Forged,” *International Herald Tribune*, 2/14/2008

A German museum has discovered that a painting long believed to be by French impressionist Claude Monet is a forgery, officials said Thursday. The painting, previously believed to be Monet’s *On the Banks of the Seine by Port Villez*, was unmasked as a fake when restorers analyzed it ahead of an exhibition on the Impressionist period, according to the city government in Cologne, where the Wallraf-Richartz Museum is located.

“We are laughing and crying at the same time,” museum spokesman Stefan Swertz said, adding that there had long been suspicions over the origins of the picture, acquired by the museum in 1954. A city government statement said that three pieces of evidence led to the conclusion that the painting was a forgery. The artist did not immediately paint with oils, but started with a preliminary sketch — not a typical Monet technique.

The restorers also discovered a transparent glaze that was meant to simulate the aging process; and the forger gave the painting two signatures in different colors.

“German Treasure Hunters Claim to Have Found Amber Room,” *Der Spiegel*, 2/19/2008

Has the Amber Room, the 18th-century chamber decoration the Nazis stole from the Soviet Union in World War II, finally been found? Treasure hunters in Germany claim they have found hidden gold in an underground cavern that they are almost certain contains the Amber Room treasure, believed by some to have been stashed away by the Nazis in a secret mission in the dying days of World War II.

The discovery of an estimated two tons of gold was made at the weekend when electromagnetic pulse measurements located the man-made cavern

20 meters underground near the village of Deutschneudorf on Germany’s border with the Czech Republic. Regional authorities have agreed to help with the excavation as the chamber may contain booby traps and has to be secured by explosives experts and engineers.

The Amber Room, made of amber panels backed with gold leaf, was created by German and Russian craftsmen in the early 18th century and given by Prussia’s King Friedrich Wilhelm I to his Russian ally Czar Peter the Great in 1716.

In October 1941, four months after the Germans invaded the Soviet Union, they disassembled it from the Catherine Palace near what was then Leningrad and brought it to East Prussia, to Königsberg -- now the Russian enclave of Kaliningrad. Part of it was exhibited in Königsberg Castle during the war. It disappeared in 1945.

“British Museum and Army Team up in Move to Rescue Iraq’s Heritage,” *The Guardian*, 2/26/2008

The British Museum and the British army have held talks about a new initiative aimed at restoring, as far as it ever can be, Iraq’s shattered cultural heritage.

The plan involves assessing major archaeological sites, including the ancient Sumerian cities of Warka and Eridu, to see how badly damaged they are and the full extent of looting. Another aspect will concentrate on southern Iraq’s emptied museums, the main one being in Basra, but also smaller ones in Kut, Amara, and Wasit. Basra-based Major Tom Holloway stated that the plan was for soldiers to help at what he called iconic cultural locations and leave a positive “legacy” after the withdrawal of British troops.

At the British Museum the initiative is being driven by Dr John Curtis, keeper of the Middle East collections and an expert on Iraq and Iran. “What’s encouraging is that the army is now taking an interest in cultural heritage,” said Curtis. “Looting has been very bad but we believe it might be on the decrease and that seems to be the evidence from satellite pictures.”

He said the situation may have improved because the last Iraqi director of antiquities was from the south and used his local connections to help stamp it out. British troops will not get

Articles You May Have Missed, continued

involved in actively stopping looters by patrolling archaeological sites. The army will be able to provide protection for any experts in Iraq, and also use its contacts with Iraqi private contractors to carry out any work needed.

“Chicago Sculpture Theft Probe Taps Dealers in Scrap, Not Art,” *Bloomberg.com*, 2/29/2008

Chicago police are searching for a stolen sculpture, and they suspect the culprit was more interested in scrap than art. The circular metal work, called *Umanita*, or humanity in Italian, was six feet high and weighs 170 pounds. It stood outside the Newberry Library on the city’s north side.

At some time between Feb. 16 and Feb. 18, *Umanita* was torn from its base and lugged away. As a work of art, the piece is worth as much as \$70,000, said Virginio Ferrari, who created *Umanita* in 1987 by cutting, shaping, and welding stainless steel.

The more relevant figure, police and art officials say, is \$300. That’s what the piece may fetch on the scrap market, probably double what it would have gotten a few years ago. “The price of steel and metal is very high right now, and historically when that happens people remove art,” said Elizabeth Kelly, director of Chicago’s Public Art Program.

The thieves pulled off their unlikely feat by rocking the piece back and forth until it broke free from a large bolt connecting it to a marble base. The library may not commission a replacement sculpture; it’s too expensive.

“The Final Insult,” *The Guardian*, 3/5/2008

In February, it was revealed that supermarket giant Tesco plans to build a gigantic warehouse near Andover, from which it is estimated a semi truck will emerge every minute - many of them on to the A303. The Tesco “MegaShed” is just the final, farcical insult after the terrible news that hit Stonehenge three months ago.

After nearly two decades of ambitious planning to rescue this landscape from traffic, came a brutal government press release: plans to enclose the A303 in a tunnel under Salisbury Plain “would not represent best use of taxpayers’ money.” The total collapse of plans to save Stonehenge from traffic means that every bit of news like the

Tesco MegaShed is just another callous graffito on the memory of its unknown creators. The archaeologist Christopher Chippindale has suggested that cleaning up the landscape would be just another form of inauthenticity.

How did we come to this? A parliamentary commission described the state of Stonehenge as “a national disgrace” back in 1997, and the plans to improve it go even further back. While Stonehenge is owned by English Heritage, this land is in the custody of the National Trust. And these are not just fields: in the eyes of modern archaeology, they are an integral part of the meaning of Stonehenge.

The National Trust has gradually pushed back modern farming, and is restoring this landscape to bare grassy chalk downland. You can walk the paths in a vast hanging silence and stillness, and then turn back and see Stonehenge as it should be seen - a bleak mass of stones with no truck in sight.

In stressing the religious meaning of the landscape as a whole, archaeology has lost sight of the uniqueness of Stonehenge as a building, and in the process pitted two organizations against each other. The National Trust has been in opposition to English Heritage plans, and contributed to the disagreements that have led to this impasse. The rival guardians forgot they were up against a state that, in the end, will always lapse into philistine accounting.

“Archaeologists Unveil New Finds at Digs for Subway in Downtown Rome,” *International Herald Tribune*, 3/7/2008

A sixth-century copper factory, medieval kitchens still stocked with pots and pans, and remains of Renaissance palaces are among the finds unveiled Friday by archaeologists digging up Rome in preparation for a new subway line.

Over the last nine months, remains — including Roman taverns and 16th-century palace foundations — have turned up at the central Piazza Venezia and near the ancient Forum where works are paving the way for one of the 30 stations of Rome’s third subway line.

The archaeological probes are needed only for stairwells and air ducts, as the 25 kilometers (15 miles) of stations and tunnels will be dug at a depth of 25-30 meters (80-100 feet) — below the level of any past human habitation, experts said. However, most of the digs

still have to reach the earth strata that date back to Roman times, where plenty of surprises may be lying in wait. That may spark problems between planners and conservationists, officials said.

Countless public and private works have been scrapped over the years in Rome and across Italy, and it is not uncommon for developers to fail to report a find and plow through ancient treasures. Rome’s 2.8 million inhabitants can rely on just two subway lines, which only skirt the center and leave it clogged with traffic and tourists. Plans for a third line that would service the history-rich heart of Rome have been put off for decades amid funding shortages and fears the work would grind to a halt amid a wealth of discoveries.

The 3-billion (US\$4.6-billion) project is due for completion in 2015, but parts of the line are scheduled to open in 2011, sporting high-tech automatic trains transporting 24,000 passengers an hour.

“Instant Karma,” *The Boston Globe*, 3/16/2008

It’s not as if “instant photography” died in an instant. Once digital cameras became affordable, its days were numbered. And technically (if not technologically), it’s not even dead. Fuji still makes instant film.

Even so, the announcement last month that Polaroid would stop producing instant film is a landmark in the history of photography. On the web, savepolaroid.com was created to protest the decision. Another website, polanoid.net, is seeking to build the “biggest Polaroid-picture-collection [on] the planet to celebrate the magic of instant photography.”

Polaroid has had a long, daunting decline since its glory days in the ‘60s and ‘70s. The then-Cambridge-based Polaroid uniquely stood at the intersection of science, business, and art. Its founder, Edwin Land, held 533 patents, second only to Thomas Alva Edison in US history. The Polaroid Land Camera was named after its inventor. But somehow implicit in its name was the suggestion that the device was so good it claimed all earth-based photography, too.

“The purpose of inventing instant photography was essentially aesthetic,” Land said in 1947, announcing the process’s invention. Ansel Adams

Articles You May Have Missed, continued

was hired as a Polaroid consultant in 1949, and the company's legendary photography collection contains some 23,000 images.

The company further burnished its artistic reputation by making six large-format 20-by-24-inch cameras that stand 5 feet tall and weigh 235 pounds. The gorgeously detailed images they produce are comparably imposing. They are, if you will, the ultimate examples of instant photography, as well as an altogether different version of the Polaroid aesthetic.

"Greece Promises Fall Opening for Much Delayed Acropolis Museum," *CBC News*, 2/1/2008

Greece's long-awaited new Acropolis Museum will open this fall, cultural officials pledged on Wednesday. The opening of the new glass-and-concrete facility at the foot of the Acropolis in Athens has suffered myriad delays over the past few years.

Greece has long touted the new museum as a strong argument for the British Museum to return the Parthenon Marbles, the famed sculptures the U.K.'s Lord Elgin removed from the site in the early 19th century. Over the years, the London museum has repeatedly rejected calls for the Marbles to be returned to Greece, citing — among other reasons — the lack of a proper facility to display the intricate ancient carvings. Regardless, the design of the Acropolis Museum includes a specific, top-floor gallery awaiting the Marbles upon their repatriation.

At one point, the new facility was slated to open in time for the 2004 Summer Games but legal disputes and the discovery of new archeological artifacts in the area have contributed to the many postponements during the past four years.

"San Xavier Angel Emerges After a Century in Hiding," *Arizona Daily Star*, 3/30/2008

A local historian likes to imagine that angels carried Mission San Xavier del Bac — a beautiful white apparition itself — through the sky and plopped it in the Sonoran Desert. If so, we now know there was one extra angel to help them: a "new" one just discovered in the 211-year-old church. Restorationists Tim Lewis and Matilde Rubio uncovered the painted angel this month on the north wall of the mission's tall, narrow baptis-

try, which is under the west tower. The angel, draped in a red cloak, had been hidden for years — perhaps a century or more.

It was covered with dirt and a thin coating of plaster that was likely applied by well-intentioned construction workers. Prior to the restoration, the entire design looked like a rough sketch, not quite complete or colored in. The faded, dusty mural appeared to have one angel in it. But when Lewis and Rubio began the painstakingly detailed process of cleaning the painting, a second angel emerged.

The two angels are floating on a cloud beneath a blue sky. No one knows who did the baptistry artwork, but historians believe it dates to 1797, when the mission was completed. The restoration process is time-consuming. Washing the painting with water or other regular cleaners would erase it. So Lewis and Rubio use special tools — a rotary drill to remove the hard coating that had covered part of the artwork, and medical scalpels and fiberglass erasers to take off the dirt. They then use ethyl silicates to coat the painting as a reinforcement. The chemicals must cure for about six months.

"The Scream's Value Unstained by Theft Damage," *The Telegraph* (UK), 04/06/2008

Edvard Munch's most famous painting, *The Scream*, is damaged beyond repair. Four years after it was stolen in an armed raid on an Oslo museum, and two years after Norwegian police found it, scratched and water-damaged, conservators have told *The Sunday Telegraph* there is nothing more they can do to restore what is undoubtedly one of the most recognizable paintings in the world.

Unlikely as it might seem, however, there is some good news for Munch fans: art experts believe the damage may have added to the value of a painting that was already estimated to be worth up to £50 million.

Despite the skill and dedication of a restoration team who have worked tirelessly to repair most of the damage, the bottom-left corner of the painting has been washed out and left scarred by a dirty brown water mark. Tests carried out in several laboratories established that water was indeed the cause of the damage, and that it had left a faded matt

layer — in strong contrast to the gloss on the rest of the painting.

The museum's paper conservator said they had decided to live with it. "I don't think it is too bad, I think it is part of the painting now, but it will be interesting to see how the public reacts," she said.

"I think there will be a lot of, 'Wow, it's really intrusive, why couldn't you remove it?' It is part of our job to try to explain why it is still there. I think it is much wiser to leave it when you are not sure how to do it in a safe way." Not that Munch would have minded that much. He once drove a nail through the top of the painting in order to hang it on a wall.

"In the Tent of Tomorrow, a Faded Map of Yesteryear," *New York Times*, 4/7/2008

For the first time in decades, there appears to be a chance that a half-acre terrazzo road map of New York State from the 1964-65 World's Fair — an exuberantly overstated mix of small-town parochialism, space-age optimism, and Pop Art irony — will be conserved as the valuable artifact it is.

The map is hidden from public view on the floor of the abandoned, roofless Tent of Tomorrow in the New York State Pavilion, at what is now Flushing Meadows-Corona Park in Queens.

The 130-by-166-foot map has cracked and crumbled badly. Vandals have wrecked what the freeze-thaw cycle has not, and weeds are a steady menace. But Prof. Frank G. Matero, the chairman of the graduate program in historic preservation at the University of Pennsylvania, is working with his graduate students on conserving four of the 567 4-by-4-foot panels that compose the map.

The original was fashioned from enlarged tracings of a Texaco map. Metal borders and black, red, and blue plastic letters, numerals, and symbols were affixed on panels at the Manhattan Tile and Terrazzo Company. These panels were taken to the Port Morris Tile and Marble Corporation in the Bronx, where terrazzo with various pigments was poured into the forms.

The conservators are not attempting to recreate the terrazzo, but they are replacing missing letters and symbols. Even after conservation, the map would be too fragile and uneven to serve as a walking surface.