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Notes from the President
Allan T. Kohl (Minneapolis College of Art & Design)
President, Visual Resources Association

During this busy, festive, end-of-semester, end-of-year season, holiday preparations take center stage. You’ve already renewed your membership for 2010 and sent in your dues payment. You voted in the Executive Board election, and even mailed off your paper ballot to approve the revised Association Bylaws. Registration for our 28th annual conference isn’t open yet, and it seems too early to book a flight to Atlanta now – after all, March 17 is three months away. So it’s all too easy to push your Association membership temporarily to the back burner.

The Romans had a two-faced deity named Janus (from whom our month of January appropriately takes its name). Janus was the god of thresholds, and hence of changes and transitions; with his two faces, he looked simultaneously forward, into the future, and backward, into the past. I suppose that might make him a good symbol for an organization, and a professional field, both of which find themselves in the throes of momentous, and often disconcerting, transformations. Sometimes it’s difficult to face the unknown future with equanimity, especially when so many of the changes we are navigating seem to have negative consequences. It’s all too tempting to look fondly backwards to “the way things used to be.”

But life in the VRA is constant and ongoing. For most of us, that day-by-day continuum is provided by our participation in the VRA Listserv (VRA-L). This invaluable forum keeps us in touch with our colleagues across the continent and around the world. In its dozens of daily messages we request the assistance of our professional community in providing for our immediate information needs; we seek advice about purchasing and licensing decisions; we recommend to others the sources and resources we have found helpful. We invite our peers to share alike our accomplishments and our disappointments. And sometimes, we just need a safe space in which to vent our frustrations.

One of the many tasks I set for the Executive Board this fall was a review of the VRA-L Listserv Guidelines. We made a few additions and revisions: clarifying, for instance, that although use of the VRA-L for commercial advertisements is prohibited, our members are welcome to send brief messages announcing the availability of projects, products, and services that are likely to be of interest to this community, providing links to additional information which the individual reader may follow if desired. While requesting that Listserv users refrain from posting partisan political messages, we welcome and facilitate objective discussion of public issues or proposed legislation relevant to the visual resources constituency.

You can review the revised VRA-L Listserv Guidelines at http://www.vraweb.org/vra-l/guidelines.html. Amid these days of comfort and good cheer, I invite each of you to re-read these Guidelines thoughtfully. Most of them are simply specific ways of reminding each of us to approach our messaging with common sense, professional comity, and personal courtesy.

Are you beginning a message string? Try to keep things brief, concise, and to the point. Don’t keep your readers guessing: clearly identify the topic of your message in the Subject field. If possible, use keywords that will make it easy for someone to locate your message in the VRA-L Archives. Very long messages have caused problems for some subscribers’ mail systems. As a general rule, lengthy, dense messages are less likely to be read by busy people with many demands on their time. Perhaps the information you wish to convey would be more effectively
presented in a well-reasoned summary, or as a series of talking points.

Please keep in mind that we were all once newcomers to this community. Even though a particular question or issue may have been discussed at some previous time on VRA-L, a newcomer (and, thankfully, we have dozens of these each year!) may not be aware of this. Older hands might take a moment to guide a new member through the process of searching the VRA-L Archive, suggesting a useful point of entry. These days, we must do everything possible to nurture and support our new members: frankly, we need them all!

Remember that old plaint: “It isn’t what you said, it’s how you said it . . . . ” Professional courtesy is most critical when we express differences of opinion. Collectively, we bring to the table many different backgrounds, skills, personalities, and life experiences. Reasoned disagreement that proposes alternative answers may be appropriate, but should always be grounded in a spirit of courtesy and mutual respect. No flaming allowed!

Are you replying to a message that someone else has posted? The default setting for most of our subscriptions will send your response out to the entire listserv, rather than to the individual who sent the original message. If you wish to reply directly to the message sender, cut and paste the sender’s name into the address in place of <VRA-L@LISTSERV.UARK.EDU>. It is particularly appropriate to do this when you are making a personal response, or when your message contains potentially sensitive information.

In fact, we should all take time to re-read any message we address to the VRA-L, as well as any response that will go out to the entire listserv, before we hit that “send” button. Review what you’ve said not only for clarity and accuracy (not to mention syntax and spelling!), but for the tone of the message as well. Could what you have said (and the way that you’ve said it!) strike someone else as being unnecessarily critical, confrontational, or condescending? If so, perhaps the same information or opinion ought to be stated more diplomatically.

Does it take more time for a message sender or respondent to do this? Or to direct a response to a specific individual rather than to everyone? Of course it does. But weigh this investment of your time against the value of the time and effort required for 800 or so of your worldwide colleagues to read your words!

If all you want to do is unsubscribe, or re-set your subscription preferences before an upcoming vacation, we don’t all need to know this. Just follow the simple instructions found at http://www.vraweb.org/vra-l/index.html. As the commercial says, “There’s an app for that.”

One final point: each message posted to the VRA-L should include the submitter’s full name, institutional or professional affiliation, and email address at the end of the message.

Old two-faced Janus has a particular significance for me these days, as I count the waning days of my Presidency while recalling the challenges and accomplishments we have shared during the past two years. We will mark the dawning of a New Year with the unveiling of the VRA Strategic Plan, a forward-looking blueprint for the future success of our organization and its individual members. During this time of reflection, I’m grateful for all of you who have chosen to be part of the ongoing life of your Association.

Visual Resources Association White Paper
Advocating For Visual Resources Management in Educational and Cultural Institutions
Published
By Maureen Burns (IMAGinED Consulting)

A VRA White Paper to promote holistic thinking about effectively meeting institutional as well as individual image user needs was published at the end of October. In an environment of rapid technological change and in the face of challenging economic conditions, Advocating for Visual Resources Management in Educational and Cultural Institutions identifies six strategic areas for consideration in planning for the future: multiple sources for images; ways of integrating personal and institutional collections; social computing and collaborative projects; the life-cycle continuum of image assets and their description; rights and copyright compliance; and visual literacy.

The paper argues that managers of image collections have successfully re-aligned operations to meet digital demands and those new technologies, extended responsibilities, and closer alliances with related services—such as information technology, rights management, and course
management—typify the changes in the work of visual resources professionals. This work now involves building institution-wide resources tied into central digital information infrastructures for the management and preservation of content in a variety of media. Image managers are increasingly involved in inter-institutional efforts to share collections and distribute labor-intensive tasks.

VRA asserts that cutting back too drastically on visual resources services carries high risk during this transitional era and does not serve an institution's broader educational mission. Current VRA President Allan Kohl states, "At a time when more academic disciplines are using images as primary teaching resources, and visual literacy is increasingly understood as being central to learning, it is more important than ever to support the building of shared collections to reduce redundancy, facilitate resource sharing, increase efficiencies, and minimize costs." In fact, many institutions have begun to re-examine the appropriate administrative home of visual resources collections in response to the changes brought about by the increasing demand for digital media in pedagogy. The VRA White Paper concludes by describing several innovative projects and providing successful administrative scenarios that offer flexible options for building shared image collections and providing support for the constituents of educational and cultural institutions.

Advocating for Visual Resources Management in Educational and Cultural Institutions is available online and may be freely distributed: http://www.vraweb.org/resources/general/vra_white_paper.pdf or http://www.facebook.com/VisualResourcesAssociation

Contact: Visual Resources Association White Paper Task Force
vra-white-paper-team@googlegroups.com

Digital Scene and Heard
Edited by Elizabeth Meyer (University of Cincinnati)
Digital Initiatives Advisory Group

Guest Editors: Johanna Bauman (ARTstor) johanna.bauman@artstor.org
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Embedded Metadata, Part I: The Basics and a History
By Greg Reser and Johanna Bauman

Embedding metadata in digital files of all kinds has become commonplace, and many of us use embedded data on a daily basis without giving it a second thought. One of the most prevalent examples is the metadata embedded in audio files. This data allows you to view your music files in a program like iTunes by artist, album, and song title, and easily transfer them together with all of their associated metadata to your iPod where you are able to access your files just as you do on your computer. Wouldn’t it be great if you could do the same thing with digital image files as they are transferred from one system or application to another or from one computer to another? It can be done, but as managers of visual resources, we have to carefully consider the benefits and risks of embedding data in image files. In this two part article, we will parse out the differences between the types of embedded metadata, provide a background to its history, discuss its uses and limitations, and offer some actual use cases where embedded metadata is being used by members of the VR community.

The Basics of Embedded Metadata

At its most basic level, data is embedded in all of the objects around us. We can look at a coffee cup, a painting, or a stapler, and discern information about it through simple observation: the mug is ceramic, the painting is on canvas, and the stapler is six and a half inches long. These simple powers of observation, however, are not always enough. If we want to answer more in depth questions such as what type of materials were used in creating these objects or when they were created, we need to reach out either to human experts who can analyze the objects, or turn to technological tools and subject them to chemical analyses in order to access this information. Inasmuch as these data are inherent to the objects themselves, they will be available as long as they continue to exist. Once we have made our observations and extracted the information from the objects, we can then record it, and as long as we can maintain a relationship between the objects and the recorded information (usually by labeling the object with a number that corresponds to a number in the recorded information), we do not have to subject them to the same analysis again and again to access and share this information. Enter the catalog, whether
Like the objects listed above, all digital files contain data about themselves. Unlike the objects, however, digital files are themselves made up of bits of data in the form of 1s and 0s, and they require the presence of additional data as well as an interface (in the form of computer software and hardware) to even be observed. Without such information as file type, compression algorithm, and color profile, image viewing tools (such as Photoshop or a web browser) would be unable to decode and display an image. Precisely because digital images and digital metadata are made of the same stuff (1s and 0s), it is possible to store them together as one digital file rather than having to rely upon an external catalog (Although the embedded data, like the image itself, still requires an interface in order to be viewed.) Image formats such as JPEG and TIFF actually have segments of their file structure set aside for storing data about the image. In a TIFF, for example, this information is stored in the header which tells software how to read the file by directing it to the image file directory (IFD) where metadata is stored in distinct byte groupings called tags.1 Moreover, the devices used to create image files, such as cameras and scanners, write a large variety of data (e.g. time and date, camera make and model, exposure and color settings, and sometimes GPS location coordinates) to the digital image as it is being created.

The “embedded” data we have been discussing so far has been limited to describing the materiality of the objects or files; what they are made of, when they were made, and what tools were used to make them, in short, the technical metadata. These technical data, however, do not tell the whole story. In the case of the mug, painting, and stapler, we have no idea who made them, why they were made, who owns (or owned them), and where they are physically located. In the case of the digital file, we know nothing about what it depicts, whether it is a picture of a mug, a painting, or a stapler. This contextual or descriptive data is the key to making objects and their surrogate digital images discoverable and accessible to users. As mentioned above, descriptive data about objects (and analog images of them in the form of slides or photographs) are typically stored separately in a catalog (or database) which provides users with a key to search and retrieve them. A familiar example is the slide collection with an electronic database. Most digital image databases and delivery systems follow the same model as the electronic data record and the slide: a user searches the records in a database and the record provides a link to a digital image. Usually, the image is displayed on a screen along with the cataloging data so that the user knows for certain what they are looking at. However, as soon as that image is downloaded to the user's own computer, it becomes disconnected from the database - its relationship to the descriptive data that was used to retrieve it is lost. It would be as if as soon as the slide was removed from the drawer all the information on the label would disappear (with the possible exception of the image accession number).

Overcoming the disconnect between descriptive data and digital images has driven the development of standards for encoding rich descriptive metadata directly in the image files themselves alongside the technical metadata, the goal being to create an image file that is truly self-describing, carrying information about itself and what it depicts everywhere it goes.

A Short History of Embedded Metadata

While the power of embedding metadata in digital images had been there from the beginning, it took certain developments in software and data standardization to make it consistently encodable, readable, and writable.

In the early years of digital imaging not only was there no consistent means of encoding data in an image, every digital device maker had their own proprietary image format. This meant that to view or edit an image, a user had to have the correct software, which was usually supplied by the manufacturer. This situation made image sharing extremely difficult, but the TIFF format came along and made a big difference. The "Tagged Image File Format" was originally created by the Aldus Corporation (makers of PageMaker) as an attempt to get desktop scanner vendors of the mid-1980s to agree on a common scanned image file format. TIFF was designed to be cross-platform, and to remain backward and forward compatible. As a result, most modern image software can open and manipulate TIFF files created 20 years ago.3

This goal of creating an environment in which software applications could easily exchange images also applied to metadata. In the TIFF standard, data segments or "tags" were set aside for metadata and were designed to be flexible and extensible, allowing for rich data to describe any aspect of the image. Although most of the data that is accommodated in the header falls into the technical realm, there is evidence that the developers of TIFF were thinking about descriptive metadata from the beginning. The core TIFF tags--the essentials that all mainstream TIFF developers should support in their products--include Image/Description, Date/Time, Artist, and...
Copyright. More tags for descriptive metadata have been added over the years creating almost endless possibilities for users. In fact, TIFF allows for an unlimited amount of user-defined metadata, but the most important of these tags are EXIF and XMP.

While the TIFF standard was widely adopted for desktop publishing, manufacturers in the emerging digital camera industry needed to define specific image attributes to assure that professional and consumer products would communicate easily with each other. In 1998 the EXIF (Exchangeable Image File Format) was developed by the Japan Electronics and Information Technology industries Association (JEITA) to standardize the way electronic devices format and record image metadata at the time the image is created. EXIF has become a default standard and is found on just about every imaging device made and is used to record such things as: camera settings, time and date, image size, compression, name of camera, and color information. When images are viewed or edited by image editing software, all of this image information can be displayed. EXIF also became a part of the TIFF format with 59 private EXIF tags. In 2002, 27 GPS tags were added to EXIF allowing hardware and software to accurately capture geospatial data. With the introduction of EXIF a truly robust schema for capturing technical metadata across different image formats came into being.

Even with the introduction of TIFF tags and EXIF, embedded metadata did not move easily between operating systems and software tools. One problem was that, out of necessity, organizations created metadata in file-specific or non-standard ways. While these tags filled a need such as workflow management, they were often not readable outside of the custom software in which they were created. In response to this, Adobe developed the Extensible Metadata Platform (XMP) as an open source infrastructure to create custom schema that are file and platform neutral. XMP was designed to normalize different schema while retaining their unique elements and values. To make this possible XMP uses web-friendly Resource Definition Format (RDF), Extensible Metadata Language (XML) and Uniform Resource Identifier (URI) standards which provide consistent ways to represent and exchange objects and concepts and their relationships to one other. XMP was first introduced in 2001 as part of Adobe Acrobat 5.0. Since then it has been added to all of Adobe's Creative Suite products and has gained acceptance by Apple, Microsoft and most commercial software developers.

In the 1970s—long before the era of digital imaging and embedding metadata—news wire service photographs were transmitting basic metadata encoded as text to describe their images as they submitted them. These early images were sent on teletype machines (similar to a fax) and the method was very simple - information such as caption, location and credit was directly typewritten or pasted at the top of the print. The standard format for the text was developed in 1979 by the International Press Telecommunications Council (IPTC) a consortium of the world's major news agencies, news publishers and news industry vendors. Later, in 1991, a new standard, the “Information Interchange Model” (IIM), was created to handle digital resources with metadata encoded as binary data within the file. Early adopters of IPTC IIM created their own methods of encoding images; it was in 1994 when Adobe incorporated it into Photoshop that its use became widespread in the press industry. Today IPTC is probably one of the most widely used schemas for embedding data in images.

In 2004, Adobe began a formal collaboration with IPTC, press and advertising representatives to create an XMP version the IPTC IIM schema. The result was the 2005 release of the "IPTC Core Schema for XMP" version 1.0 containing 31 elements broken up into four major categories: photographer, content, image, and status. To answer the needs of the Stock Photo and Cultural Heritage communities, another update was released in 2009 with 45 additional elements which allow identification of people and artworks in an image.

We have seen how embedded metadata developed from the need to easily share image files across applications and then was extended by the need of news organizations to send images electronically around the world. The most recent standard, XMP, is gaining wide acceptance among hardware and software makers and should bring us closer to the goal of making image metadata a ubiquitous part of using digital images. Image users, whether they are faculty, students, VR curators, or large data aggregators should be able to open and work with image metadata as easily as they open the image itself.

Stay tuned for Part II where we will address some of the more practical aspects of embedded metadata, such as the challenges of managing multiple schema even with the potential for standardization provided by XMP, tools that can be used for embedding metadata, its uses and limitations for managing visual resources, and finally some actual use cases.

1 AWare System's TIFF FAQ [http://www.awaresystems.be/imaging/tiff/faq.html] Adobe TIFF
2 Although it could be argued that a well organized analog collection where the slides or photographs are labeled doesn’t really require an outside database in order for images to be searched and retrieved. The organization of the drawers themselves and the metadata printed on them in the form of labels and captions together comprise a self-contained image information and retrieval system.


4 See Exif Version 2.2 (PDF), http://exif.org/Exif2-2.PDF, section 3.2.


7 IPTC Core & Extension: http://www.iptc.org/cms/site/index.html?channel=CH0099 (website)

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**Upcoming Conferences**
Compiled by Brooke Cox (DePauw University)

**American Library Association Midwinter Meeting**
January 15–19, 2010
Boston, MA
http://www.ala.org/ala/conferencesevents/upcoming/midwinter/2010/index.cfm

**College Art Association**
February 10–13, 2010
Chicago, IL

**Association of Architecture School Librarians**
March 4-7, 2010
New Orleans, Louisiana
http://www.architecturelibrarians.org/

**Library Technology Conference**
March 17-18, 2010
Macalester College, St. Paul, MN
http://digitalcommons.macalester.edu/libtech_conf/2010/

**Computers in Libraries**
April 12-14, 2010
Arlington, VA
http://www.infotoday.com/cil2010/

**Museums and the Web**
April 13-17, 2010
Denver, CO
http://www.archimuse.com/mw2010/

**ACM/IEEE Joint Conference on Digital Libraries (JCDL)**
June 21-25, 2010
Gold Coast, Australia
http://www.jcdl-icadl2010.org/
Drew University
Krista White accepted the position of GIS Support Specialist in the Environmental Studies and Sustainability Program at Drew University in June 2009. As the GIS Support Specialist, Krista provides instructional support for faculty, staff and students using ArcGIS and Google Earth software. Among her responsibilities will be to help design and maintain the Environmental Studies and Sustainability Program web site, which includes a page about GIS at Drew containing electronic versions of the tutorial documentation and links to GIS resources available on the Internet. She also writes tutorials, and helps troubleshoot any software difficulties users might have. Prior to accepting her new position as GIS Support Specialist, Krista was the part-time Visual Resources Curator in the Drew University Department of Art History. Sonja Seekely-Rowland was hired in August 2009 to fill the Visual Resources Curator position in the Department of Art History.

James Madison University
In October 2009, James Madison University announced the creation of a permanent part-time position of Visual Resources Assistant in the School of Art and Art History. Grace Barth, BA Art History, JMU, recently accepted this position. Grace worked in the Visual Resource Collection during her senior year at JMU, and is currently enrolled in the online MLIS program at the University of South Carolina, Columbia. She is a new member of the VRA and is excited about working in the visual resource profession. Christina Updike, Visual Resources Curator at JMU School of Art and Art History, is excited about the new position since the JMU collection has been a staff of one with student assistant support since its inception in 1974.

Salt Lake Community College
Jennifer Hughes is the new Assistant Cataloging Librarian at Salt Lake Community College (SLCC) where she will be involved in an initiative to build up a digital repository to serve the college (approximate enrollment of 60,000) as well as the greater Salt Lake Community. She comes to SLCC from the University of Texas at Austin, where she recently completed her M.S. in Information Studies. Her last position was that of Assistant to the Curator for the Fine Arts Visual Resources Collection at the University of Texas at Austin where she was a project leader for an interdepartmental initiative to design, create, and implement a new web-based CCO cataloging tool.

Southern Methodist University
Adrianna Stephenson, MA Art History, TCU and BA Art History, Washington and Lee, recently accepted the position of Visual Resources Assistant in the Lady Tennyson d'Eyncourt Visual Resources Library. Adrianna worked in the VR collections at her graduate and undergraduate institutions, holds a teaching certificate, and has recently worked on research projects at the Amon Carter Museum and the Kimbell Art Museum. She is enthusiastic about joining the profession and is eager to participate in the Visual Resources Association.

University of Leeds
In October 2009, Jodie Double accepted the position of Digital Repositories Manager at the University of Leeds, in the Edward Boyle Library where she will manage several services, including LUDOS (Leeds University Digital Objects) and also be involved in institutional repository support. Prior to joining the staff at the University of Leeds, Jodie was the Director of Digital Collections at the University of Minnesota, College of Design from 1997-2009. Inga Theissen is now the new Director of Digital Collections for the College of Design at the University of Minnesota.

University of Washington
Joshua Polansky was hired by the University of Washington, College of Built Environments as director of its Visual Resources Collection. He comes to the role after two years as a graduate assistant to Heather Seneff, former director of the collection. Joshua earned his Master of Library and Information Science degree at the University of Washington Information School, focusing on archives and cataloging. He previously served as Computing Manager of the University of Washington Rome Center in Rome, Italy. His academic interests are in the fields of Classics and History, with a particular interest in the history of the Pacific Northwest.

Chapter News
Compiled by Trudy Levy (Image Integration)

Great Lakes Chapter
The Chapter held a joint meeting with Art Library Society of North America Ohio Valley Chapter (ARLIS-OV) at the Toledo Museum of Art. Alison Huftalen (ARLIS-OV) and Julia Chytil (VRA-GL) were our hosts on November 13. The chapter thanks them for the outstanding meeting. In the first presentation, “Transitions in Librarianship: Art Librarians in Transition”, we heard from librarians at the beginning and towards the end of their careers. The participants were Alison Huftalen (Toledo Museum of Art), Jennifer Pollock (University of Cincinnati), and Pam Eyerdam (Cleveland Public Library). After a short break, Meghan Musolff and Alex Nichols discussed the VRA White Paper. At the Great Lakes chapter meeting, members discussed the Atlanta conference, officer elections and the location of the fall 2010 meeting. Both chapters were treated to a tour of ‘Chihuly Toledo!’ with Jutta Page, Curator of Glass. The final group tours included the Visual Resource Collection and the Library.

The VRA Mid-Atlantic Chapter met jointly with ARLIS/DC-MD-VA on Friday, November 13, 2009 at George Washington's Mount Vernon Estate and Gardens in Northern Virginia. Although the day was grey and rainy, our collective spirit was undampened. There were 17 attendees from the VRA Mid-Atlantic Chapter and 30 attendees from ARLIS/DC-MD-VA. The day began with a tour of the Mt. Vernon Mansion. Business meetings for the two groups followed. Lunch at the Mt. Vernon Inn was a unique treat with wait-staff in historic costume and the setting and menu choices reflective of colonial times. After lunch we were given tours of the David W. Reynolds Museum and Educational Center, followed by a tour of the library where some rare books and special collections were on display.

We owe thanks to Joan Stahl, the Librarian for Mount Vernon Estate and Gardens, for making all the arrangements for our meeting.

VRA Mid-Atlantic Chapter attendees were: Kathe Albrecht, Jessica Bailey, Cyndi Frank, Andrea Gibbs, Liz Gushee, Macie Hall, Chris Hinojosa, Jeannine Keefer, Gretchen Kennedy, Gerrianne Schaad and guest Gunder Varinliooglu, Steve Tatum, Tina Updike, Jay Van Rensselaer and Bob Willis.

The New England Chapter held its fall meeting on October 16th at the Clark Art Institute in Williamstown, MA, along with ARLIS/NE and VRA/Upstate New York. We enjoyed tours of the Stone Hill Center, the Williamstown Art Conservation Center, Special Collections at the Library,
and the exhibit “Steps Off the Beaten Path: Nineteenth Century Photographs of Rome and Its Environ.” We had a lively chapter meeting and a delicious lunch in the Library Penthouse - and we were pleasantly surprised to have a warm, sunny day.

Our chapter has just elected new chapter officers: Carey Mack Weber (Fairfield University) as Chapter Chair, and Carolyn Caizzi (Yale University) as Chapter Treasurer. Mary Hughes (Northeastern University) will continue as Chapter Secretary.