# International Photo Metadata Conference
## Working together cooperatively

by Ulrik Södergren, with assistance from David Riecks



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*Panelists on "Keywording vs. Controlled Vocabularies" at the International Photo Metadata Conference in Malta included (left to right) Sarah Saunders, moderator; Chris Town from Imense.com; Yvan Cohen from ONAsia.com / ImageKeyworder.com; Andrew Labonte of Corbis; Kirsti O'Sullivan from Keywording.com; and Raphael Troncy of CWI / W3C Multimedia Semanics.*

The second International Photo Metadata Conference took place in Malta on June 5, 2008 at the beginning of the Annual Coordination of European Picture Agencies Press Stock Heritage (CEPIC) Congress. Serious progress has been made on several of the issues that were raised at last year's conference. Normally with standardization work, the expectation is that it moves at a glacial pace with the implementation slightly faster but still painfully slow. However with the International Press Telecommunications Council (IPTC) Photo Metadata Working group, you see everyone, even competing parties, working together cooperatively and with great urgency.

Last year's conference centered around the just-published white paper on photo metadata released by this same working group. The white paper pointed out several areas where the IPTC standard needed to be extended or changed. People wanted special fields for model releases, fields to express licensing information, better fields for localization, flexible fields for controlled vocabulary data (emotions, dominant color and classification of art) as well as numerous other fields. IPTC recently published the fourth draft of a proposed addendum, as well as some modifications to the current standard. This draft specification addresses most of those requests and was approved at the IPTC Annual General Meeting on July 7, 2008 in Glasgow, Scotland. The group hopes to have all documents ready for release sometime in September.

## Metasurvey reveals serious flaws

David Riecks, project leader of the Stock Artists Alliance (SAA) Photo Metadata Project and Imaging Technology Standards Committee chair, presented preliminary findings of a "MetaSurvey" conducted by the SAA as part of its Photo Metadata Project in partnership with the U.S. Library of Congress. So far, the SAA MetaSurvey has observed the presence of embedded metadata in previews and thumbnails in use on the websites of major stock image distributors. The results were disturbing, indicating that most images posted to stock distributor websites carry little if any metadata. This presentation should be a wakeup call to photographers, as copyright holders, and to the stock distributors who represent their images. Of those images that do contain metadata, nearly all used the decades-old "legacy" IPTC method of storing information, rather than the newer XMP encoding method. The older information interchange model method of encoding is still the most prevalent for those images that are available online. This is sobering news, especially since other parts of the industry have put much effort into upgrading and improving the existing standards. Riecks observed that, in the case of larger "preview" images that lack metadata, the cause may be due to the various image scaling and watermarking software that are part of the server-side process, as part of content management systems, or stand-alone software

that ignores and thus strips all metadata from the images. In light of the "Orphan Works" legislation that has been proposed in both the United States and the United Kingdom, this is a huge issue, since images that do not carry even basic identifying information—such as photographer and copyright notices—will be at huge risk of becoming orphans. It is one thing if people outside the photography industry don't embed this kind of information, but when the major stock image distributors don't comply, the consequences are a disaster. Without an immediate industry-wide dedication to add and preserve metadata in all displayed, published and delivered image files—and correcting the errors of the hundreds of thousands (or possibly millions) of image files now posted with little or no metadata—we should expect that many stock images in the post-Orphan Works world will be easy marks for those seeking "free to use" images. The SAA is continuing with their MetaSurvey, with tracking of stock images from primary to multiple subdistributors as well as examining the workflow of photographers and image users to better understand the issues. More information about SAA's Photo Metadata Project can be found at stockartistsalliance.org/photometadata-project.

## Not so contentious controlled vocabularies

In the panel on "Keywording vs. Controlled Vocabularies," the conversation centered primarily on the problems associated with the use of free text keywords versus controlled vocabularies. Several speakers raised the issue of how to handle controlled vocabularies. One thought that since the IPTC has included a field for controlled vocabulary terms within the draft specifications, perhaps a minimal set of terms could be developed for use when images are exchanged between distributors. At present, each of the major distributors has developed its own controlled vocabulary and method of storing those terms. Merging them would not be a simple task. Kirsti O'Sullivan raised a request for a standardized exchange format for vocabularies. This would make it easier for image suppliers and keywording companies to satisfy the larger distributors.

Andrew LaBonte from Corbis described how Corbis works with vocabularies. It has a system that makes it possible to cross relate names with a large database of celebrities, places etc. It also uses those vocabularies to make automatic translation into

*David Riecks, who is the chief technical advisor to PLUS, filled in for Jeff Sedlik to provide an update on the PLUS Coalition Registry during the metadata conference.*

nine languages. LaBonte was the first to state that he did think it was possible for various groups and distributors to work together jointly to develop a limited set of terms that everyone could agree upon—especially when it comes to more concrete subject matter, like numbers of people, names of places and more.

Raphaël Troncy of the CWI/WC3 spoke about search terms and how they apply to building the semantic web. One of the larger challenges is with multimedia (still and moving images) on the web and how to disambiguate these relationships. The current web trend is towards building "mash-ups" between multiple data sources—linking maps with statistics, news and images. However, ambiguous datasets are one of the main obstacles preventing widespread use.

## Intelligent search engines

After a long and interesting debate on the need for standardization of vocabularies, Chris Town's presentation regarding his company Imense was like a breath of fresh air. He described Imense's search tool, which uses statistical image analysis to categorize images so they can be tagged with specific content. He admitted there was still a lot of development to be done. However, the demo he gave was compelling, as the Imense search engine could already handle fairly complex queries, such as finding images of a beach at sunset with mountains in the background or smiling people. But he admitted that manually entered keyword text will always be needed and that the real power is when you combine image analysis with textual information. Give this search engine a test at imense.com.

## Social media and geo-tagging

Social media and how to monetize the consumer use of images was a recurring topic in almost every seminar during the entire CEPIC conference. In the "Software for Better Metadata" panel discussion, Josh Weisberg and Gunar Penikis touched on this subject, and showed why geo-tagging is really hot. Weisberg from Microsoft demonstrated some new tools for image handling, with impressive use of GPS and map information. Gunar Penikis from Adobe talked about linking geo-tagged images with historical databases or event databases to create rich user experiences. He also said that Adobe is working on face recognition and emotional tags for its software.

*Harald Löffler and Michael Steidl gave a public presentation of the updated IPTC Core and the new IPTC Extension schemas. Löffler is with Ifra and Steidl, IPTC.*

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*The attention of the audience was on the speakers at the metadata conference in Malta.*

Dennis Walker of Camera Bits demonstrated some of the advanced features of its Photo Mechanic software using code replacement and other look-up options, as well as its Structured Keyword Catalog feature to speed up the adding of keywords with a user controlled vocabulary.

Abbie Enock of Capture Ltd. showed how her company had implemented the PLUS standards into its web-based products that image libraries can use for directly licensing images to clients. This gives the small distributor an easy way to tap into a unified system for both pricing and properly documenting the rights permitted in a license to the end customer.

Michael Steidl, managing director of IPTC, and Harald Löffler, research manager at Ifra, gave a brief public presentation of the updated IPTC Core and the new IPTC Extension schemas. While there currently seems to be a lot of development that is catering to consumer needs, it is important that it is done in a way that does not create conflicts with industry standards. One issue is that industry standards tend to develop more slowly, over time, while consumer trends move rapidly. This forces the industry to keep the pace up if they want to be the leading dog and not the tail wagging the dog.

## PLUS / MILE

David Riecks stood in for Jeff Sedlik and brought the group up to date on the progress of the Picture Licensing Universal System (PLUS) and its unified system for accurately recording the legal use of licensed images. PLUS is moving forward with its goal to simplify the communication and management of image rights worldwide (the final specification can be found at ns.useplus.org. Of note is that a number of the metadata fields are included as a part of the new IPTC Core extensions, which were just approved. In addition, PLUS is in the middle of an 18-24 month integration stage and will soon be launching a centralized system of registries that will allow searching for people and companies, licenses and even images (using a reverse image search technology).

Another interesting undertaking is the Metadata Image Library Exploitation (MILE) project. Jessica Tier of the Bridgeman Art Library along with Sarah Saunders, representing the British Association of Picture Libraries and Agencies, explained the complex image credits and copyright issues involved in using cultural heritage images. A photograph of a painting has several

layers of ownership, and it is important to store this information in the metadata container. The MILE group is about to launch a beta of its Orphan Works database to help others find the owners of an image or determine that there is no owner to contact.

## Tagging at the image source

The last speaker was Hiroshi Maeno from Canon. Last year Nikon, Canon and Hasselblad were asked if they could implement a globally unique image identifier (GUID) that is embedded in the image file by the camera. Representatives from Canon and Nikon asked at last year's conference which metadata fields should be included, and a number of the responses centered on "how" the metadata could be added. The IPTC Photo Metadata working group has kept in touch with the Camera & Imaging Products Association (CIPA), which has now formed an Image File Format Study Ad. Hoc Working Group that involves several camera manufacturers cooperating to improve the EXIF standard. Maeno reported that both Canon and Nikon are already working on the GUID and showed us an example on how such a code could be constructed. The ad hoc working group recently sent a report to the CIPA board regarding suggested improvements to the EXIF standard.

Special Note: Nikon seems to have done a follow-up of their own. The most recent firmware update (2.0) for Nikon D3 includes a change to the setup menu which allows for appending two 32 byte strings of metadata to captured images. The two fields are artist and copyright, and you can enter any info using the built-in "keyboard" and toggle a check box to on or off. The artist field translates into the creator field in the IPTC Core (or byline of legacy IPTC) and the copyright field translates into the copyright notice field in both legacy and IPTC Core.

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*Photographer David Riecks is a consultant on digital imaging and metadata. He has been involved with the IPTC4XMP working group; authored the IPTC Core User's Guide and serves on the IPTC Photo Metadata working group. Riecks chairs the SAA Imaging Technology Standards Committee and SAA's current Photo Metadata Project, was a founding member of UPDIG, serves as the chief technical advisor to PLUS, and founded ControlledVocabulary.com to assist others with keywording and embedded metadata issues. His book,* Digital Photo Management: Using Metadata to Store, Protect and Find Your Images *(Focal Press) is due out this fall.*