



PRISM:
Publishing Requirements for Industry Standard Metadata

Version 3.0

**Guide to the
PRISM Metadata for Images**

October 4, 2012



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1 INTRODUCTION

The PRISM Metadata for Digital Images provides a new standard format for publishers to use in coding metadata for the management of digital images from Call Sheets through production, management and reuse. This document describes digital image metadata encoding in detail and provides some examples of how it is used.

1.1 About The Guide to PRISM Metadata for Images

The PRISM Metadata for Images [PRISMMIS] Specification within the *PRISM Documentation Package* describes the elements from the PMI namespace that are included within PRISM for the description of images including digital photographs, illustrations and art. This guideline document describes how to apply the full range of metadata fields to images to facilitate the management of the images from image creation throughout production, archive and aggregation. Note that in some workflows PMI fields are used to communicate parameters of a photo assignment between the editor making the assignment and the photographer. In other workflows these metadata fields are added to images to facilitate archive and reuse.

1.2 How Can I Use this Guide?

This guideline document describes how to apply the full range of metadata fields to digital images. The contributors to this document represented a full range of magazine types—from fashion to travel to sports to news to automotive. Even the concerns of catalogs and books were considered here. So this document represents a very complete starter set – and one that no single publication would use in its entirety!

1.2.1 Implementation Options

The PRISM Metadata for Images (pmi:) fields may be combined with fields from other namespaces to provide for a complete description of a digital image. PRISM Metadata for Images may be implemented as Profile 1 (XML), Profile 2 (XML/RDF) or Profile 3 (XMP).

One expression of the PRISM Metadata for Images elements is a standardized XML model for PRISM Profile 1. An XML schema (XSD) has been constructed to standardize the order and frequency of PRISM elements to describe digital images. This XSD may be used as the basis for designing a digital image management system.

Another expression of the PRISM Metadata for Images elements is a standardized XMP schema for PRISM Profile 3. This will enable users to embed PRISM Metadata for Digital Images directly in those images as XMP.

1.2.2 High Level Image Metadata Groupings

This specification groups digital image metadata based on function. These groupings can be considered to be virtual containers for image metadata fields. For XMP implantations these are often the “panel” level. The top level groupings include:

- General metadata about the image. (Most publications use several of these fields!)
- Metadata about the photographer and other contributors to the image.
- Composition metadata for the image. (May be used for photo assignments).
- Metadata about image location. This may include the setting, the location of shoot and place pictured.
- Metadata about what is IN the picture. (Do you want to organize images by the people, events or objects in the image?)
- Usage Rights metadata

1.2.3 Nesting Level of XML Model

The XML model developed to accompany this guide was designed so it can be mapped into either a current Digital Asset Management System (DAM) technologies or XMP as implemented in CS5. Note that although in theory XMP defines an infinitely deep hierarchical nesting of structures, in practice Adobe's built-in File Info feature for custom metadata in CS through CS4 was limited to flat organization (nests 0 levels down). CS5 represents an advance in technology and allows for one level of nesting. This IDEAlliance Specification for image metadata, like the current IPTC Photo Metadata Specifications, looks to the future and provides a model with one level of nesting.

1.3 The PRISM Specification Documentation Package

The PRISM Documentation Package consists of:

1.4 The PRISM 3.0 Documentation Package

The PRISM Documentation Package consists of:

Because PSV is built on PRISM 3.0, there is a close relationship between the two specifications. In fact, access to the PRISM 3.0 Documentation Package is critical to the implementation of PSV. The PRISM 3.0 Documentation Package consists of:

1.4.1 General Documents

This is a set of general or overview documents that apply to PRISM.

Document	Description
PRISM Introduction [PRISMINT] http://www.prismstandard.org/specifications/3.0/ PRISM_introduction_3.0.pdf or http://www.prismstandard.org/specifications/3.0/	Overview, background, purpose and scope of PRISM; examples; contains no normative material.

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Document	Description
PRISM introduction 3.0.htm	
PRISM Compliance [PRISMCOMP] http://www.prismstandard.org/specifications/3.0/ PRISM_compliance_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_compliance_3.0.htm	Describes three profiles of PRISM compliance for content and systems; includes normative material.

1.4.2 PRISM Metadata Specifications

This is the set of documents that outline the prism metadata fields and values by PRISM metadata category. PRISM has modularized its metadata specification by namespace so users may pick those modules that meet their unique business requirements without having to implement the entire PRISM specification.

Document	Description
The PRISM Basic Metadata Specification [PRISMBMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Basic_Metadata_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Basic_Metadata_3.0.htm	Describes the basic metadata elements contained in the PRISM namespace to describe article content; includes normative material.
PRISM Advertising Metadata Specification [PRISMADMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Advertising_Metadata_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Advertising_Metadata_3.0.htm	Describes advertising metadata elements including those drawn from AdsML, GWG and Ad-ID; includes normative material.
The PRISM Subset of Dublin Core Metadata Specification [PRISMDCMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Dublin_Core_Metadata_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Dublin_Core_Metadata_3.0.htm	Describes the metadata elements from the Dublin Core namespace that are included in PRISM; includes normative material.
The PRISM Image Metadata Specification [PRISMIMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Image_Metadata_Specification_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Image_Metadata_Specification_3.0.htm	Describes the metadata elements contained in the PRISM Metadata for Images Namespace and other related image namespaces, includes normative material.
The PRISM Recipe Metadata Specification [PRISMRMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Recipe_Metadata_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Recipe_Metadata_3.0.htm	Describes the metadata elements contained in the PRISM Recipe Metadata Namespace, includes normative material

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Document	Description
The PRISM Usage Rights Metadata Specification [PRISMURMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Usage_Rights_Metadata_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Usage_Rights_Metadata_3.0.htm	Describes the metadata elements contained in the PRISM Usage Rights Namespace; includes normative material. This namespace will supersede elements in both the prism: and prl: namespaces in version 3.0 of the specification.

1.4.3 PRISM Aggregator Message Markup Specification

This module documents the PRISM Markup Elements and Attributes for use with the PRISM Aggregator Message. At the time of the publication of the Introduction to PRISM, the PAM Message remains at version 2.1. This set of documents includes:

Document	Description
The PRISM PAM Markup Specification [PRISMPAMMS] http://www.prismstandard.org/specifications/2.1/ PRISM_PAM_Markup_2.1.pdf or http://www.prismstandard.org/specifications/2.1/ PRISM_PAM_Markup_2.1.htm	Describes the XML elements and attributes used to encode the PRISM Aggregator Message from both the pam: and pim: namespaces; includes normative material.

1.4.4 PRISM Inline Markup Specification

This module documents the PRISM Inline Markup Elements and Attributes for use with the PRISM Aggregator Message. This set of documents includes:

Document	Description
The PRISM Inline Markup Specification [PRISMIMS] http://www.prismstandard.org/specifications/2.1/ PRISM_PIM_Markup_Specification_3.0.pdf or http://www.prismstandard.org/specifications/2.1/ PRISM_PIM_Markup_Specification_3.0.htm	Describes the XML elements used to encode the inline markup for the PRISM Aggregator Message. Includes normative material.

1.4.5 PRISM Controlled Vocabulary Specifications

These modules are new with PRISM 3.0. All controlled vocabularies and their terms are documented in this publication set.

Document	Description
The PRISM Controlled Vocabulary Markup Specification [PRISMCVMS] http://www.prismstandard.org/specifications/3.0/ PRISM_Controlled_Vocabulary_Markup_3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM_Controlled_Vocabulary_Markup_3.0.htm	Describes the metadata fields in the PRISM Controlled Vocabulary Namespace that can be used to describe a controlled vocabulary. Actual PRISM controlled vocabularies are now placed in the PRISM Controlled Vocabularies Specification [PRISMCVS]

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The PRISM Controlled Vocabularies Specification [PRISMCVS] http://www.prismstandard.org/specifications/3.0/ PRISM CV Spec 3.0.pdf or http://www.prismstandard.org/specifications/3.0/ PRISM CV Spec 3.0.htm	The PRISM Controlled Vocabularies are now documented in this document.
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1.4.6 Additional PRISM Documentation

The Guide to the PRISM Aggregator Message [[PAMGUIDE](#)] documents the PRISM Aggregator Message (PAM), an XML-based application of PRISM.

The PRISM Cookbook [[PRISMCB](#)] documents implementation strategies for PRISM Profile 1 applications.

The Guide to PRISM Usage Rights [[RIGHTSGUIDE](#)] documents an XML-based PRISM application for the expression of PRISM Usage Rights. The Guide is accompanied by an XSD that can be used as the basis for developing a digital rights management system based on PRISM Usage Rights.

The Guide to PRISM Metadata for Images [[IMAGEGUIDE](#)] documents an XML-based PRISM Profile 1 application for the expression of the structure and use of PRISM Metadata for Images and can be used as the basis for developing an image management system based on PRISM Metadata for Images and for implementing PMI in XML.

The Guide to PRISM Recipe Metadata and XML Encoding [[RECIPEGUIDE](#)] documents the XML-based PRISM Profiles for the encoding of recipes for:

- Establish a Recipe Database
- Establish a tagging scheme to code a wide variety of recipes in XML
- Tag recipes within the PAM message
- Tag recipes in nextPub XML Content Source

1.4.7 Access to PRISM Documentation

The PRISM documentation package, the PAM guide (see above), the PAM DTD, the PAM XSD and a range of other information concerning PRISM are all publicly and freely available on the PRISM website, www.prismstandard.org.

1.4.8 Access to PAM Schemas

Standard URLs have been established to access PRISM/PAM XSDs and DTDs as well as the XSD for the new PRISM Usage Rights Model.

To access PAM XSDs and DTDs:

<http://www.prismstandard.org/schemas/pam/2.1/>
<http://www.prismstandard.org/schemas/pam/2.1/pam.xsd>
<http://www.prismstandard.org/schemas/pam/2.1/pam-dc.xsd>
<http://www.prismstandard.org/schemas/pam/2.1/pam-prism.xsd>

To access PRISM Rights Model XSD

<http://www.prismstandard.org/schemas/rights/3.0/rightsmodel.xsd>

To access PRISM Recipe Tagging and Recipe Database XSD

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<http://www.prismstandard.org/schemas/recipe/3.0/recipemodel.xsd>

1.4.9 nextPub PRISM Source Vocabulary Documentation Set

nextPub has developed a series of specifications collectively known as the PRISM Source Vocabulary. The use case for PSV is to encode semantically rich content for transformation and delivery to any platform. This Specification is made up of a modular documentation package that builds on PRISM 3.0 and HTML5. Over time new modules may be added to the documentation package. The documentation package for the nextPub PRISM Source Vocabulary Specification Version 1.0 consists of:

Document	Description
PRISM Source Vocabulary Specification Overview [PSVSO] http://www.prismstandard.org/specifications/psv/1.0/PSV_overview.pdf or http://www.prismstandard.org/specifications/psv/1.0/PSV_overview.htm	The Introduction to the PRISM Source Vocabulary provides an introduction and a non-technical overview of the PRISM Source Vocabulary.
PRISM Source Vocabulary Specification [PSVS] http://www.prismstandard.org/specifications/psv/1.0/PSV.pdf or http://www.prismstandard.org/specifications/psv/1.0/PSV.htm	The PRISM Source Vocabulary Specification defines semantically rich for source metadata and content markup that can be transformed and served to a wide variety of output devices including eReaders, mobile tablet devices, smart phones and print.
PRISM Source Vocabulary Markup Specification [PSVMS] http://www.prismstandard.org/specifications/psv/1.0/PSV_markup.pdf or http://www.prismstandard.org/specifications/psv/1.0/PSV_markup.htm	The PSV Markup Specification documents the XML tags in the PSV namespace that are used to encode XML Source Content.
PAM to PSV_Guide [PAMPSVGUIDE] http://www.prismstandard.org/specifications/psv/1.0/PAM_PSV.pdf or http://www.prismstandard.org/specifications/psv/1.0/PAM_PSV.htm	This Guide documents mappings from PAM XML to PSV XML. It is normative only.

1.5 PSV Content Management Schema

In order to assist implementers develop a PSV-based federated content management solution, the nextPub Working Group is providing an XML Schema (XSD) that can serve as the basis for the design of a PSV content repository.

Note: The PSV CM schema is not designed for tagging content. It is provided simply to serve as a basis for the design of a content repository. Metadata building blocks from this schema can be combined with HTML5 by publishers who wish to develop a hybrid PSV metadata and content tagging schema.

1.6 Other PSV Schemas

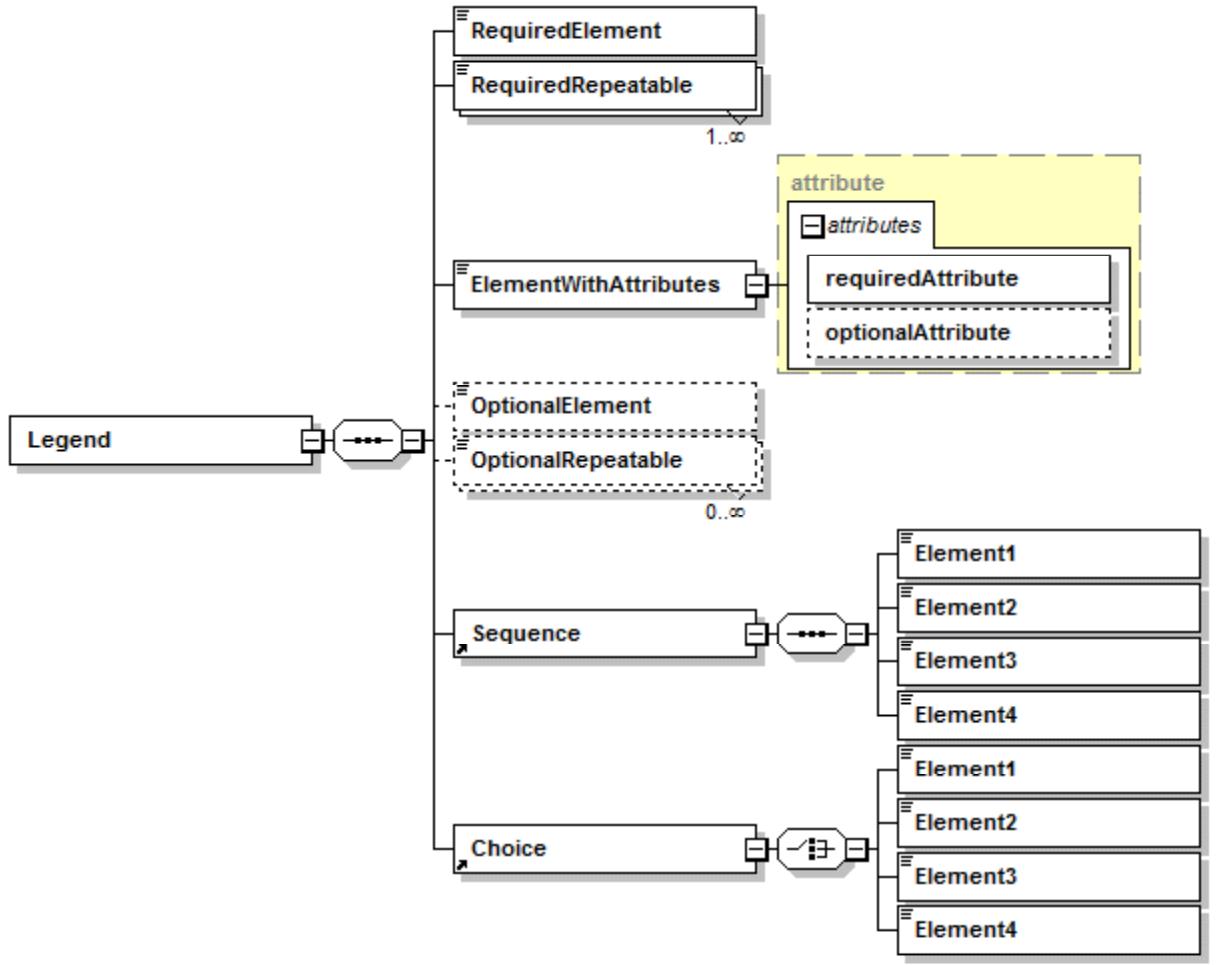
Because PSV is a flexible framework, it supports many different use case scenarios. A different schema, using the PSV metadata fields and content encoding can be developed for each different use case. In order to assist PSV implementers, the nextPub Working Group is planning to provide a number of XML Schemas (XSDs) to support common use cases including tagging an article and transmitting articles to content aggregators. These PSV sample schemas will be available from the nextPub website (<http://www.nextpub.org>) and documented in the nextPub PSV Implementation Guide that will be published following the publication of this specification.

1.7 Legend for Diagrams

In this guide, the XML model is often illustrated by a model diagram. Each diagram was produced with the XML Spy product. These diagrams show the elements and attributes that make up a model and their order and frequency.

The legend for reading XML model diagrams is shown in Figure 1.1. Elements that are required by the model are shown in a solid box. Elements that are optional are shown in a dotted box. Likewise attributes may be required (solid box) or optional (dotted box). A repeatable occurrence of elements is indicated by numbers below each element box to the right.

The diagrams also indicate how elements are assembled. When building some models, elements may occur in a sequence with a specified order. Other models provide a choice from among a number of elements. The legend in Figure 1.2 shows the connectors for sequence and choice.



Generated by XMLSpy

www.altova.com

Figure 1.1 Legend for XML Diagrams

1.8 The Relationship to PRISM

The PRISM Working Group was established in 1999 by a group of companies primarily involved in the production of serial and web-based editorial content. This group includes publishers, other rights holders, systems integrators, software developers and content aggregators who face common content application challenges such as re-use of content in multiple media types, rights and contract management, better access to content archives, and faster, less expensive exchange and integration of disparate sets of content across the enterprise and with outside business partners. The representatives of these companies believed that developing and adopting a standard set of XML metadata would assist them in managing and automating their labor-intensive content workflow processes.

The result of this collaboration was the PRISM specification. The PRISM specification defines a standard for describing, exchanging, and reusing content in both print and electronic publishing contexts. The Working Group released Version 1.0 of the PRISM specification in April of 2001.

The PRISM specification is built on a strong foundation of existing standards such as XML, RDF, the Dublin Core, and various ISO specifications for locations, languages, and date/time formats. On top of

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this base, it defines a number of XML namespaces and controlled vocabularies in order to meet the goals of interoperability, interchange, and reuse.

During 2005 and 2006, a subgroup of PRISM developed an initial draft of a metadata specification for digital images called Digital Image Management Metadata or DIM2. This work aggressively tackled topics such as delivery platforms and digital rights that really justified their own place in the PRISM Specification. In early 2007, work on the digital image metadata specification was set aside and concepts from that early work were brought back to the broader PRISM Working Group for inclusion in the general specification.

Based on this input, the PRISM Working Group released PRISM 2.0, the first major revision in the specification since its initial release in 2001 in February 2008. This major revision of the PRISM Specification addressed emerging requirements for publishers and media companies to deliver content in an online and multimedia environment, as well as in print. Then in 2009, PRISM 2.1 was released. This version of the specification adds metadata to manage and track rights and permissions for all types of digital media, including digital images. The PRISM Metadata for Images Specification builds on PRISM metadata fields as the basis for encoding image metadata and adds metadata fields that are unique to the encoding of images.

Note: The PRISM Metadata for Images Specification will be used as the basis for developing metadata to describe short-form video in 2012.

1.9 Relationship to PRISM Aggregator Message (PAM)

The PRISM Working Group defined an XML tag set for encoding metadata and article content for delivery to aggregators. This tag set, known as the PRISM Aggregator Message, or PAM, was released in 2004 and is widely implemented. Since the use case for PAM is delivering content to aggregators, this XML tag set is relatively stable. When the PRISM Metadata for Images Specification was developed, its elements were NOT added to PAM because coding detailed metadata for images was out of scope for the PAM XML tag set.

1.10 Relationship to PRISM Source Vocabulary (PSV)

The nextPub Working Group has defined an XML tag set for encoding semantically rich, platform-agnostic source publication content and metadata for delivery across platforms and channels. This implementation of PRISM 3.0 is known as the PRISM Source Vocabulary (PSV). The PSV tag set is based on PRISM 3.0 and includes mechanisms for tagging image metadata. See the PRISM Source Vocabulary Specification [[PSVS](#)] for more information. In addition, PRISM 3.0 documents the controlled vocabularies for image metadata fields in the PRISM Controlled Vocabularies Specification [[PRISMCVS](#)]. Tagging image metadata using PSV is discussed in an Appendix of this document.

1.11 Relationship to IPTC and Photoshop

Adobe has published a number of “photoshop” metadata elements in their own photoshop: namespace, which correspond to elements in the original IPTC IIM Specification and which are accommodated in current IPTC Photo Metadata Specifications. Because IDEAlliance is committed to coordinating their PRISM specification with other industry specifications, we are including some of the photoshop:

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metadata fields in our Metadata for Images Specification along with fields from the IPTC Photo Metadata Specification.

1.12 Relationship to XMP

XMP is an open, extensible framework developed by Adobe Systems to enable capturing and carrying metadata within a digital asset throughout the publishing workflow. XMP is based on the same standards upon which PRISM is based, i.e. XML and RDF. As such, XMP is one viable option for implementing PRISM metadata across assets with different media formats. As of PRISM 2.0, XMP has been identified to be Profile 3 of the PRISM Metadata Specification. XMP is a clear implementation option for this specification.

1.13 If you have questions:

If you have a question or comment about these guidelines, please contact info@prismstandard.org.

In your message, please provide the following information:

- Your name and company
- Telephone contact information
- If applicable, reference the document(s) and section(s)

2 STATUS

2.1 Document Status

The status of this document is:

✓	Draft	11/04/2011
✓	Released for Public Comment	12/15/2012
✓	Final Draft Released for Comment	06/12/2012
✓	Final Specification	10/04/2012

2.2 Document Location

The location of this document is:

http://www.prismstandard.org/specifications/PMI/PMI_Guidelines.pdf

2.3 Version History

Version Number	Release Date	Editor	Description
1.0 Draft A	September 3, 2009	Kennedy	A Guide to PRISM Metadata for Images
1.0 Draft B	June 3, 2010	Kathy Sandler	A Guide to PRISM Metadata for Images
1.0 Draft C	August 5, 2010	Kennedy	A Guide to PRISM Metadata for Images
1.0 Draft D	August 18, 2010	Kennedy	A Guide to PRISM Metadata for Images
1.0 Draft E	Sept 1, 2010	Kennedy	A Guide to PRISM Metadata for Images
1.0 Public Comment Draft	Sept 9, 2010	Kennedy	A Guide to PRISM Metadata for Images for Public Comment
1.0 Release	April 21, 2011	Kennedy	A Guide to PRISM Metadata for Images Final
3.0 Draft	December 15, 2011	Kennedy	Updated as part of the PRISM 3.0 Documentation Package in support of nextPub.
3.0 Final Draft	June 12, 2012	Kennedy	Final Draft Specification with comments resolved
3.0 Specification	October 4, 2012	Kennedy	Final Specification

3 PRISM IMAGE METADATA ENCODING

This PRISM Guide addresses PRISM metadata fields that can be applied to images to facilitate the management of the images from image creation, submission throughout production, archive and aggregation.

3.1 PRISM Metadata Namespaces for Images

Metadata fields that can be used to encode images come from a number of namespaces within the PRISM Specification and from outside.

The Table 1 lists the applicable namespaces and document within the PRISM Documentation Set that can be used for the encoding of digital images.

PRISM Document	Element Namespace
The PRISM Subset of the Dublin Core Metadata Specification [PRISMDCMS]	dc: and dcterms:
The PRISM Basic Metadata Specification [PRISMBMS]	prism:
The PRISM Image Metadata Specification [PRISMIMS] (Note this document includes namespaces from Adobe and IPTC commonly used for images)	pmi: photoshop: lptc4xmpExt:
The PRISM Usage Rights Metadata Specification [PRISMURMS]	pur:

Table 3.1 PRISM Namespaces for Image Encoding

PRISM Namespace Prefix	Recommended Namespace URIs
dc:	xmlns:dc="http://purl.org/dc/elements/1.1/"
dcterms:	xmlns:dcterms="http://purl.org/dc/terms/"
prism:	xmlns:prism="http://prismstandard.org/namespaces/basic/2.0/"
pmi:	xmlns:pmi="http://prismstandard.org/namespaces/pmi/2.2/"
photoshop:	xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/"
lptc4xmpExt:	xmlns:lptc4xmpExt="http://iptc.org/std/iptc4xmpext/2008-02-29/"
pur:	xmlns:pur="http://prismstandard.org/namespaces/pur/2.1/"

Table 3.2 Namespace URIs for PRISM Image Encoding

Note: The case of both the namespace and the field name vary depending upon who developed the namespace and field names. For example PRISM uses lowercase namespaces and camel case property names. Dublin Core uses the same format. Photoshop uses a lowercase namespace but initial cap field names. IPTC uses initial cap namespace and field names while vCard uses its own unique capitalization scheme. Case is significant.

3.2 PRISM Metadata for Images Alphabetical Listing

The following are the metadata fields that may be applied to images listed in alphabetical order by field name. Note that these fields come from a number of namespaces.

- pur:adultContentWarning
- pur:agreement
- pur:agreementID
- prism:byteCount
- Iptc4xmpExt:City
- pmi:color
- pmi:contactInfo
- dc:contributor
- pur:copyright
- Iptc4xmpExt:CountryCode
- Iptc4xmpExt:CountryName
- dc:creator
- photoshop:Credit
- pur:creditLine
- photoshop:DateCreated
- dc:description
- pmi:displayName
- pmi:distributorProductID
- pur:embargoDate
- prism:event
- pmi:eventAlias
- pmi:eventEnd
- pmi:eventName
- pmi:eventStart
- pmi:eventSubtype
- pmi:eventType
- pur:exclusivityEndDate
- pur:expirationDate
- pmi:field
- dc:format
- pmi:framing
- photoshop:Headline
- pur:imageSizeRestriction
- prism:industry
- photoshop:Instructions
- Iptc4xmpExt:LocationCreated
- Iptc4xmpExt:LocationShown
- pmi:make
- pmi:manufacturer
- pmi:model
- pmi:modelYear
- prism:object
- pmi:objectDescription
- pmi:objectSubtype
- pmi:objectType
- pur:optionEndDate
- pmi:orientation
- pur:permissions
- prism:person
- pmi:positionDescriptor
- pmi:productID
- pmi:productIDType
- pur:restrictions
- pur:reuseProhibited
- Iptc4xmpExt:ProvinceState
- prism:rating
- pur:rightsAgent
- pur:rightsOwner
- pmi:sequenceName
- pmi:sequenceNumber
- pmi:sequenceTotalNumber
- pmi:shotID
- pmi:slideshowName
- pmi:slideshowNumber
- pmi:slideshowTotalNumber
- photoshop:Source
- dc:subject
- Iptc4xmpExt:Sublocation
- dc:title
- photoshop:TransmissionReference
- pmi:viewpoint
- pmi:visualTechnique

3.3 Usage Rights for Images

Usage Rights are linked to other image metadata fields using the “agreementID” field. See Figure 3.1.

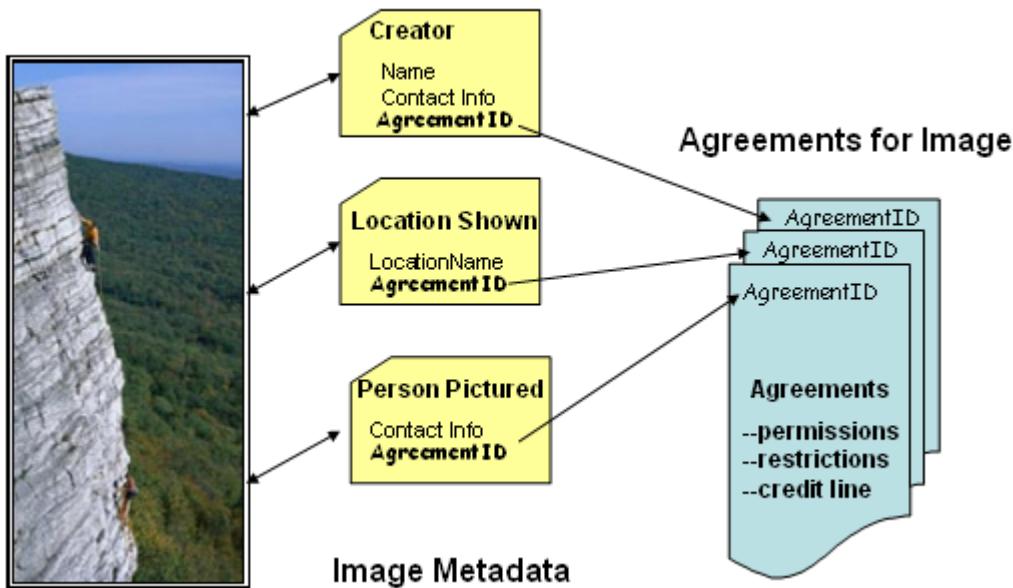


Figure 3.1 The AgreementID links to Agreements

Image creators and contributors, people or objects pictured and the location shown each may have an agreements like a property release, subject release, event release, object release, agency agreement or photographer contract. Agreements that spell out permissions, restrictions and required credit lines are linked using a unique agreementID.

3.4 PRISM Metadata Fields for Images

Numerous fields can be applied to images according to this specification. Fields can be organized into 12 groups. All metadata groups are optional. Some may occur more than one time. The metadata groups, definition of each and occurrence per image are listed in Table 3.2 and shown graphically in figure 3.2.

Group	Description	Occurrence
General	General description of the image	1
Creator	Information about the photographer and those contributing to the image	0 or 1
Composition	Metadata about image composition	0 or 1
Location	Information about the setting, the physical/geographic location where the image was created and the physical/geographic location shown in the image	0 or 1
Person Pictured	Information about each person shown in an image	0 or 1
Event Pictured	Information about an event shown in an image	0 or 1
Object Pictured	Information about each object shown in an image	0 or 1
Usage Rights	Usage rights information for every aspect of an image	0 or 1

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Table 3.3 PRISM Metadata for Images Metadata Groups

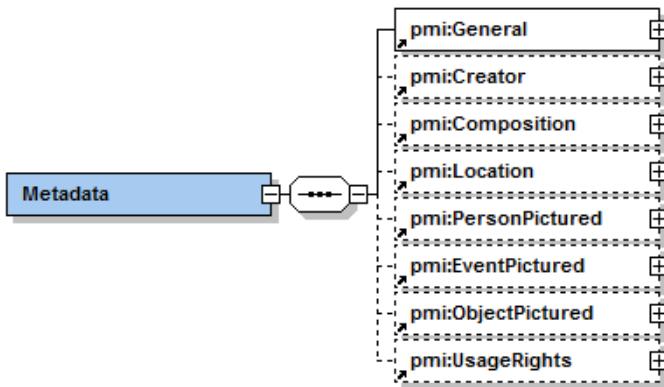


Figure 3.2 Metadata for Images Field Organization

3.4.1 General Image Metadata

Numerous metadata fields from the identified namespaces can be applied to generally describe the image. See Figure 3.3.

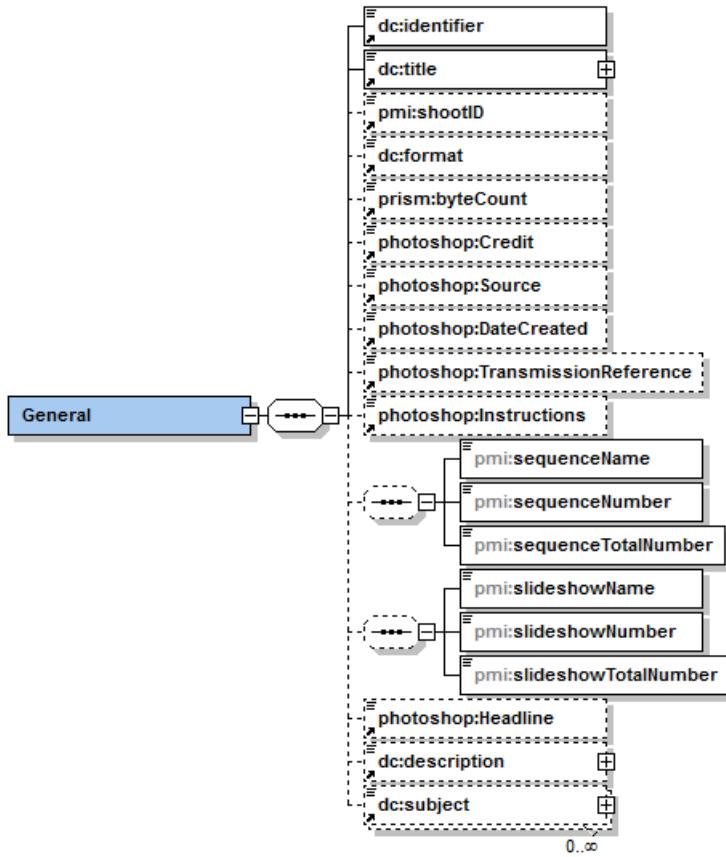


Figure 3.3 General Digital Image Metadata

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3.4.2 Creator Metadata

These metadata fields can provide information about the photographer and contributors to the image. See Figure 3.4.

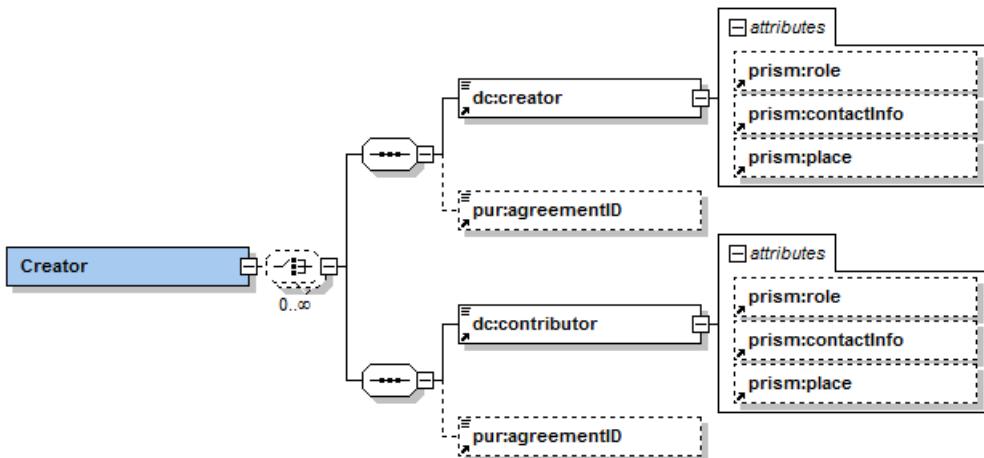


Figure 3.4 Creator's Metadata

3.4.3 Image Composition Metadata

These metadata fields are used to indicate the composition of the image and include fields such as the elevation of the shot, the angle of the shot, the framing of the shot and the lighting. Note that these fields may be specified by a photo editor before a shoot to give direction to the photographer. Or they may be added by editorial staff after the shoot to facilitate archive and reuse. These fields all appear on the composition panel. See Figure 3.5.

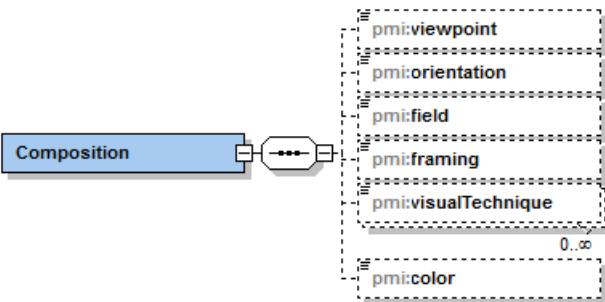


Figure 3.5 Image Composition Metadata

3.4.4 Location Metadata

These metadata fields describe the setting, the location the image was created commonly known as “Location of Shoot,” and the location shown, in the case where the location of shoot is different from the place pictured. See Figure 3.6.

Note: If the traditional location elements such as photoshop:City have been used, understand that this older standard made no distinction as to whether this information referred to the location shown in the image, or the location from where the photo was taken (created). In the vast majority of cases the place pictured and the location created are the same. However, users should review the past use of these fields before presuming that this information also applies to LocationShown. In some implementations, the user

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may choose to combine traditional location elements with Iptc4xmpExt:LocationCreated elements to distinguish between the two types of locations. However, our recommendation is to use the newer elements shown below wherever possible.

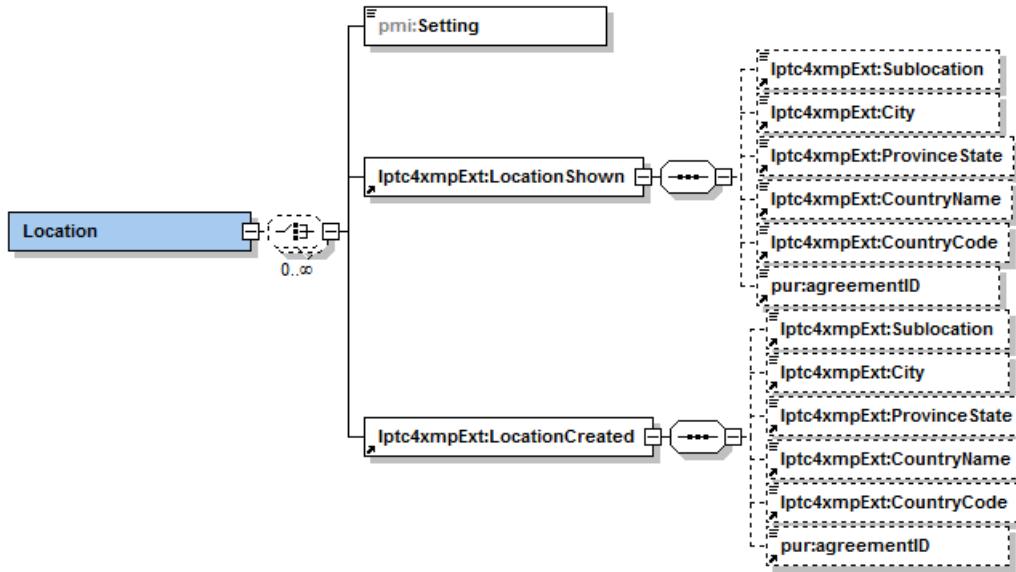


Figure 3.6 Location Metadata

3.4.5 Person Pictured Metadata

These metadata fields are used to provide information about each person pictured in the image. These fields provide information about the person, their credit and contact information. See Figure 3.7.

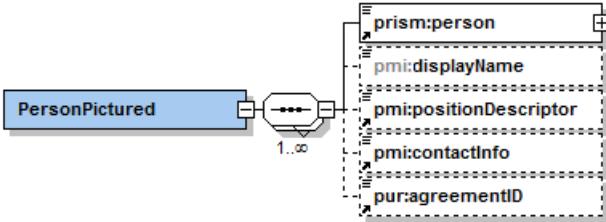


Figure 3.7 People Pictured Metadata

3.4.6 Event Metadata

These metadata fields are used to provide information about an event pictured in the image or contributing to the image such as what it is and credit and contact information. See Figure 3.8.

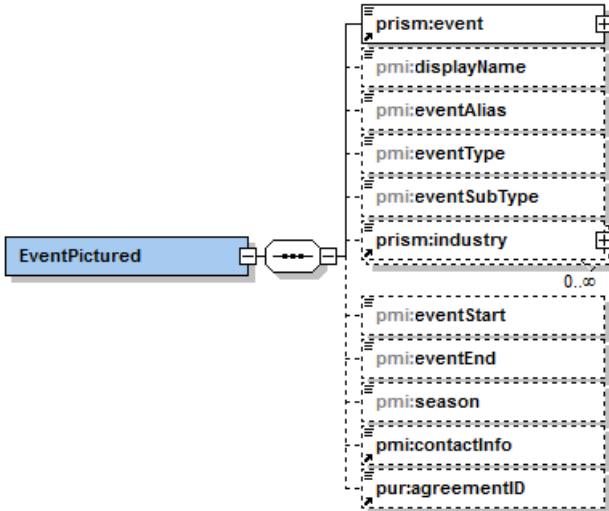


Figure 3.8 Event Pictured Metadata

3.4.7 Object Metadata

These metadata fields are used to provide information about an object pictured in the image or contributing to the image such as what it is and credit and contact information. Note that object may either be a natural object such as a flower or a dog, or it may be a manufactured object such as a sink or a truck. See Figure 3.9.

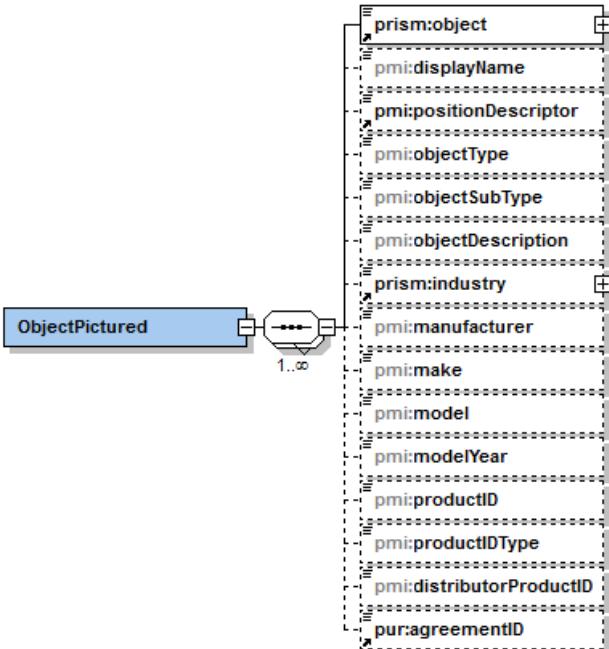


Figure 3.9 Object Pictured Metadata

3.4.8 Image Usage Rights Metadata

These metadata fields that enable encoding of usage rights for digital images come from the PRISM Usage Rights Namespace (pur:). Reference the Guide to PRISM Usage Rights and the PRISM Usage Rights Namespace Specification for more information. See Figure 3.10.

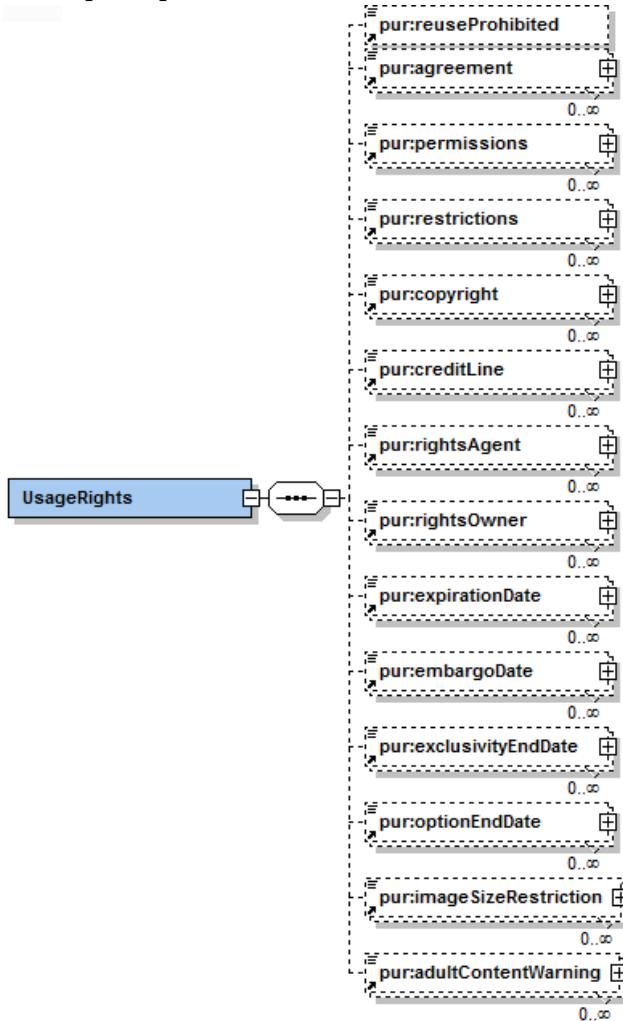


Figure 3.10 Image Usage Rights Structure for Images

4 PRISM METADATA FOR IMAGES COMPLIANCE

Just as PRISM metadata for encoding articles of magazines or journals can fit one of two compliance profiles, so can PRISM DIM2 metadata. PRISM Profile one encodes data in XML. PRISM Profile two is RDF/XML according to the PRISM subset of RDF.

4.1 PRISM Metadata for Images Placement

Just as with other kinds of PRISM metadata, there are three common places to use metadata, the choice of which to use depends on your application environment and your level of PRISM compliance.

1. A description of a single resource can be provided as a complete, standalone, XML document that describes another file. Such a use is shown in Sample 1. Metadata encoded as a complete, standalone XML document may be either PRISM profile one (XML only) or PRISM profile two (RDF/XML)
2. A description can be included in the digital asset and travel with the asset. For images, PRISM metadata will most likely be included within the XMP envelope [[XMP](#)]. Sample 2 shows a sample of a simple PRISM PMI metadata within XMP. When embedding PRISM DIM2 metadata using XMP, we expect PRISM profile two (RDF/XML) with additional restrictions required by XMP
3. Descriptions of a number of files can be collected together in a 'manifest'. Such a collection is shown in Sample 3. Metadata encoded as a standalone manifest may be either PRISM profile one (XML only) or PRISM profile two (RDF/XML).

4.1.1 Standalone XML Metadata for an Image

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:prism="http://prismstandard.org/namespaces/basic/2.1/"
  xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/"
  xmlns:Iptc4xmpExt="http://iptc.org/std/Iptc4xmpExt/2008-02-29/"
  xmlns:pur="http://prismstandard.org/namespaces/prismusagerights/2.1/"
  xmlns:pmi="http://prismstandard.org/namespaces/pmi"
  targetNamespace="http://prismstandard.org/namespaces/pmi"
  >
  <rdf:Description
    rdf:about="http://wanderlust.com/2000/08/Corfu.jpg">
    <dc:identifier rdf:resource="http://wanderlust.com/content/2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models</dc:description>
    <dc:creator prism:role="photographer">John Peterson</dc:creator>
  </rdf:Description>
</rdf:RDF>
```

4.1.2 Encoding Groups of Property Values with XMP

There is often a need to describe groups of things as a property value. If there are several objects pictured in an image, how could we indicate that? RDF provides several predefined (built-in) types and properties that can be used to describe a group of property values. XMP uses these mechanisms when multiple field

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values are to be entered. If there are multiple values for a metadata field for the resource PRISM recommends listing the multiple values inside a single PRISM element using the RDF Bag, Alt or Seq containers to be compatible with XMP. Bag is used when the items have no order, Seq is used to indicate an order and Alt is used when there are alternate, equivalent values (usually in different languages). In fact XMP will NOT allow for multiples for any field name. They must be inside a container structure.

4.1.3 XMP Example



Figure 4.1 Sample image for XMP example

```
<?xpacket id="W5M0MpCehiHzreSzNTczkc9d"?>
<x:xmpmeta xmlns:x="adobe:ns:meta/" x:xmptk="Public XMP Toolkit Core 4.0">
  <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
    <rdf:Description rdf:about="" xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/">
      <photoshop:Credit>CameraMasters, Inc.</photoshop:Credit>
      <photoshop:Source>D. Kennedy</photoshop:Source>
      <photoshop:DateCreated>2005-04-01T00:00-08:00</photoshop:DateCreated>
      <photoshop:TransmissionReference>KK1212</photoshop:TransmissionReference>
      <photoshop:Headline>GRACoL Press Run</photoshop:Headline>
    </rdf:Description>
    <rdf:Description rdf:about="" xmlns:dc="http://purl.org/dc/elements/1.1/">
      <dc:description>
        <rdf:Alt>
          <rdf:li xml:lang="x-default">This picture shows the press sheet produced at the GRACoL Press Run hosted by MAN Roland. Pictured are the Chair and CoChair of the GRACoL Committee, the Roland 700 press and the MAN Roland Staff.</rdf:li>
        </rdf:Alt>
      </dc:description>
    </rdf:Description>
    <rdf:Description rdf:about="" xmlns:dcterms="http://purl.org/dc/terms/" xmlns:prism="http://prismstandard.org/namespaces/basic/2.0/" xmlns:pmi="http://prismstandard.org/namespaces/pmi/1.0/" xmlns:Pur="http://prismstandard.org/namespaces/prismusagerights/2.1/">
      <dcterms:subject>
```

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```
<rdf:Bag>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>GRACoL</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>Color Management</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>Printing Specifications</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>MAN Roland Presses</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>Press Run</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>Offset Lithography</prism:subject.text>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
        <prism:subject.text>IDEAlliance</prism:subject.text>
    </rdf:li>
</rdf:Bag>
</dcterms:subject>
</dcterms:creator>
<rdf:Seq>
    <rdf:li rdf:parseType="Resource">
        <prism:creator.name>D. Kennedy</prism:creator.name>
        <prism:creator.a-role>photographer</prism:creator.a-role>
        <pmb:contactInfo>BEGIN:VCARD
VERSION:3.0
N:Kennedy;Dianne;;
FN:Dianne Kennedy
EMAIL;type=INTERNET;type=WORK;type=pref:dianne@gracol.org
TEL;type=WORK;type=pref:630-444-1941
END:VCARD</pmb:contactInfo>
        <Pur:agreementID>agmt1</Pur:agreementID>
    </rdf:li>
</rdf:Seq>
</dcterms:creator>
</rdf:Description>
<rdf:Description rdf:about="" xmlns:Iptc4xmpExt="http://iptc.org/std/Iptc4xmpExt/2008-02-29/">
    <Iptc4xmpExt:LocationShown>
        <rdf:Bag>
            <rdf:li rdf:parseType="Resource">
                <Iptc4xmpExt:Sublocation>MAN Roland, NA</Iptc4xmpExt:Sublocation>
                <Iptc4xmpExt:City>Westmont</Iptc4xmpExt:City>
                <Iptc4xmpExt:ProvinceState>IL</Iptc4xmpExt:ProvinceState>
                <Iptc4xmpExt:CountryName>USA</Iptc4xmpExt:CountryName>
                <Iptc4xmpExt:CountryCode>US</Iptc4xmpExt:CountryCode>
```

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```
</rdf:li>
</rdf:Bag>
</Iptc4xmpExt:LocationShown>
<Iptc4xmpExt:LocationCreated>
<rdf:Bag>
<rdf:li rdf:type="Resource">
<Iptc4xmpExt:Sublocation>MAN Roland, NA</Iptc4xmpExt:Sublocation>
<Iptc4xmpExt:City>Westmont</Iptc4xmpExt:City>
<Iptc4xmpExt:ProvinceState>IL</Iptc4xmpExt:ProvinceState>
<Iptc4xmpExt:CountryName>USA</Iptc4xmpExt:CountryName>
<Iptc4xmpExt:CountryCode>US</Iptc4xmpExt:CountryCode>
</rdf:li>
</rdf:Bag>
</Iptc4xmpExt:LocationCreated>
</rdf:Description>
<rdf:Description rdf:about="" xmlns:pmi="http://prismstandard.org/namespaces/pmi/1.0/" xmlns:prism="http://prismstandard.org/namespaces/basic/2.0/" xmlns:Pur="http://prismstandard.org/namespaces/prismusagerights/2.1/">
<pmi:setting>indoor</pmi:setting>
<pmi:viewpoint>front</pmi:viewpoint>
<pmi:orientation>horizontal</pmi:orientation>
<pmi:field>Roland 700 press as the background</pmi:field>
<pmi:framing>Center example sheet, surrounded by participants</pmi:framing>
<pmi:visualTechnique>
<rdf:Bag>
<rdf:li>posed group shot</rdf:li>
</rdf:Bag>
</pmi:visualTechnique>
<pmi:color>color</pmi:color>
<pmi:personPictured>
<rdf:Bag>
<rdf:li rdf:type="Resource">
<prism:person>Don Hutcheson</prism:person>
<pmi:displayName>Don Hutcheson</pmi:displayName>
<pmi:positionDescriptor>first row, second from the left</pmi:positionDescriptor>
<pmi:contactInfo>BEGIN:VCARD
VERSION:3.0
N:Hutchenson;Don;;
FN:Don Hutcheson
EMAIL;type=INTERNET;type=WORK;type=pref:don@gracol.org
TEL;type=WORK;type=pref:767-555-1212
END:VCARD</pmi:contactInfo>
</rdf:li>
<rdf:li rdf:type="Resource">
<prism:person>Gerry Gerlach</prism:person>
<pmi:displayName>Gerry Gerlach</pmi:displayName>
<pmi:positionDescriptor>first row, right</pmi:positionDescriptor>
<pmi:contactInfo>BEGIN:VCARD
VERSION:3.0
```

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```
N:Gerlach;Gerry;;
FN:Gerry Gerlach
EMAIL;type=INTERNET;type=WORK;type=pref:gerry@gracol.org
TEL;type=WORK;type=pref:799-505-1200
END:VCARD</pmi:contactInfo>
    </rdf:li>
    </rdf:Bag>
</pmi:personPictured>
<pmi:eventPictured rdf:parseType="Resource">
    <prism:event>GRACol Press Run</prism:event>
    <pmi:displayName>GRACol Press Run</pmi:displayName>
    <pmi:eventType>Test</pmi:eventType>
    <pmi:eventSubType>Press Run</pmi:eventSubType>
    <prism:industry>
        <rdf:Bag>
            <rdf:li>NAICS 323110          Commercial Lithographic
Printing</rdf:li>
        </rdf:Bag>
    </prism:industry>
    <pmi:eventStart>3/31/2005</pmi:eventStart>
    <pmi:eventEnd>4/1/2005</pmi:eventEnd>
    <pmi:season>spring</pmi:season>
    <Pur:agreementID>agmt2</Pur:agreementID>
</pmi:eventPictured>
<pmi:objectPictured>
    <rdf:Bag>
        <rdf:li rdf:parseType="Resource">
            <prism:object>MAN Roland Press</prism:object>
            <pmi:displayName>MAN Roland Press</pmi:displayName>
            <pmi:positionDescriptor>background</pmi:positionDescriptor>
            <pmi:objectType>Printer</pmi:objectType>
            <pmi:objectDescription>sheetfeed, offset, medium
format</pmi:objectDescription>
            <prism:industry>NAICS 323110          Commercial Lithographic
Printing</prism:industry>
            <pmi:manufacturer>Man Roland</pmi:manufacturer>
            <pmi:model>700</pmi:model>
            <pmi:modelYear>2005</pmi:modelYear>
            <pmi:productID>MRU700</pmi:productID>
        </rdf:li>
    </rdf:Bag>
</pmi:objectPictured>
</rdf:Description>
<rdf:Description rdf:about="" xmlns:Pur="http://prismstandard.org/namespaces/prismusagerights/2.1/">
    <Pur:reuseProhibited>no</Pur:reuseProhibited>
    <Pur:copyright>
        <rdf:Bag>
            <rdf:li>©2005 CameraMasters, all rights reserved</rdf:li>
        </rdf:Bag>
    </Pur:copyright>
```

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```
<Pur:agreement>
  <rdf:Bag>
    <rdf:li rdf:parseType="Resource">
      <Pur:agreement.a-agreementID>agmt1</Pur:agreement.a-agreementID>
      <Pur:agreement.a-status>unlimited</Pur:agreement.a-status>
      <Pur:agreement>Dianne Kennedy, photographer. </Pur:agreement>
      <Pur:agreement.a-type>photographer contract</Pur:agreement.a-type>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
      <Pur:agreement.a-agreementID>agmt2</Pur:agreement.a-agreementID>
      <Pur:agreement.a-status>unknown</Pur:agreement.a-status>
      <Pur:agreement>MAN Roland hosted the GRACoL Press Run
event</Pur:agreement>
      <Pur:agreement.a-type>event release</Pur:agreement.a-type>
    </rdf:li>
  </rdf:Bag>
</Pur:agreement>
<Pur:creditLine>
  <rdf:Bag>
    <rdf:li rdf:parseType="Resource">
      <Pur:creditLine>Photographed by D. Kennedy</Pur:creditLine>
      <Pur:creditLine.a-required>True</Pur:creditLine.a-required>
      <Pur:creditLine.a-agreementID>agmt1</Pur:creditLine.a-agreementID>
      <Pur:creditLine.a-lang>en-US</Pur:creditLine.a-lang>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
      <Pur:creditLine>Thanks to MAN Roland NA for contributing press
time.</Pur:creditLine>
      <Pur:creditLine.a-required>True</Pur:creditLine.a-required>
      <Pur:creditLine.a-agreementID>agmt2</Pur:creditLine.a-agreementID>
      <Pur:creditLine.a-lang>en-US</Pur:creditLine.a-lang>
    </rdf:li>
  </rdf:Bag>
</Pur:creditLine>
<Pur:rightsOwner>
  <rdf:Bag>
    <rdf:li rdf:parseType="Resource">
      <Pur:rightsOwner>Dianne Kennedy</Pur:rightsOwner>
      <Pur:rightsOwner.a-agreementID>agmt1</Pur:rightsOwner.a-agreementID>
      <Pur:rightsOwner.a-lang>en-US</Pur:rightsOwner.a-lang>
    </rdf:li>
  </rdf:Bag>
</Pur:rightsOwner>
</rdf:Description>
<rdf:Description rdf:about="" xmlns:xapMM="http://ns.adobe.com/xap/1.0/mm/">
  <xapMM:DocumentID>phs:docid:BIM8:98da6696-6038-11e0-9b39-
f78cf0b8ccac</xapMM:DocumentID>
</rdf:Description>
</rdf:RDF>
</x:xmpmeta>
```

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```
<?xpacket end="w"?>
```

Figure 4-2: XMP packet for sample

4.1.4 Example PRISM Image Manifest

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:prism="http://prismstandard.org/namespaces/basic/3.0/"
  xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/"
  xmlns:Iptc4xmpExt="http://iptc.org/std/Iptc4xmpExt/2008-02-29/"
  xmlns:pur="http://prismstandard.org/namespaces/prismusagerights/3.0/"
  xmlns:pmi="http://prismstandard.org/namespaces/pmi/3.0/"
  targetNamespace="http://prismstandard.org/namespaces/pmi"

<rdf:Description rdf:about="pressrun01.jpg">
  <dc:creator>D. Kennedy</dc:creator>
  <photoshop:Credit>CameraMasters, Inc.</photoshop:Credit>
  <pur:rightsOwner>Dianne Kennedy</pur:rightsOwner>
  <photoshop:DateCreated>20050401</photoshop:DateCreated>
  <pur:copyright>©2005 CameraMasters, all rights reserved</pur:copyright>
  <photoshop:TransmissionReference>KK1212</photoshop:TransmissionReference>
  <photoshop:Headline>GRACoL Press Run</photoshop:Headline>
  <pmi:sequenceName>Man Roland Press Run 04/05</pmi:sequenceName>
  <pmi:sequenceNumber>1</pmi:sequenceNumber>
  <pmi:sequenceTotalImages>3</pmi:sequenceTotalImages>
</rdf:Description>

<rdf:Description rdf:about="pressrun02.jpg">
  <dc:creator>D. Kennedy</dc:creator>
  <photoshop:Credit>CameraMasters, Inc.</photoshop:Credit>
  <pur:rightsOwner>Dianne Kennedy</pur:rightsOwner>
  <photoshop:DateCreated>20050401</photoshop:DateCreated>
  <pur:copyright>©2005 CameraMasters, all rights reserved</pur:copyright>
  <photoshop:TransmissionReference>KK1212</photoshop:TransmissionReference>
  <photoshop:Headline>GRACoL Press Run</photoshop:Headline>
  <pmi:sequenceName>Man Roland Press Run 04/05</pmi:sequenceName>
  <pmi:sequenceNumber>2</pmi:sequenceNumber>
  <pmi:sequenceTotalImages>3</pmi:sequenceTotalImages>
</rdf:Description>

<rdf:Description rdf:about="pressrun03.jpg">
  <dc:creator>D. Kennedy</dc:creator>
  <photoshop:Credit>CameraMasters, Inc.</photoshop:Credit>
  <pur:rightsOwner>Dianne Kennedy</pur:rightsOwner>
  <photoshop:DateCreated>20050401</photoshop:DateCreated>
  <pur:copyright>©2005 CameraMasters, all rights reserved</pur:copyright>
  <photoshop:TransmissionReference>KK1212</photoshop:TransmissionReference>
  <photoshop:Headline>GRACoL Press Run</photoshop:Headline>
```

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```
<pmi:sequenceName>Man Roland Press Run 04/05</pmi:sequenceName>
<pmi:sequenceNumber>3</pmi:sequenceNumber>
<pmi:sequenceTotalImages>3</pmi:sequenceTotalImages>
</rdf:Description>
</rdf:RDF>
```

Figure 4-3: Describing Multiple Resources in a Manifest

Appendix A PRISM METADATA FOR IMAGES GLOSSARY

This appendix contains a glossary for the metadata elements within the PRISM Metadata for Images Specification. The elements are listed alphabetically. Following the element name is the namespace pointing to the document in the PRISM documentation package where that element appears.

- **adultContentWarning (pur)** Specifies an adult content warning for an article or media object.
- **agreement (pur:)** Specifies the contract, license or release for a media object.
- **agreementID (pur:)** The agreement identifier is the link between image metadata elements and the specified usage rights metadata elements. So <LocationShown has an <agreementID that links to the <pur:AgreementID and other usage rights elements such as <pur:permissions and <pur:rightsAgent.
- **byteCount (prism:)** Specifies the digital image size in bytes.
- **City (Iptc4xmpExt:)** Specifies the city.
- **color (pmi:)** Specifies the color of the image.
- **contactInfo (pmi:)** Contact information, may include vCard formatted contact information.
- **contributor (dc:)** Entities responsible for making contributions to the content of an image.
- **copyright (pur:)** Copyright statement for the resource.
- **CountryCode (Iptc4xmpExt:)** ISO country code for of the location of the shoot such as “DE”.
- **CountryName (Iptc4xmpExt:)** Specifies country.
- **creator (dc:)** An entity primarily responsible for creating the content of a media resource.
- **Credit (photoshop:)** Gives credit the provider of the image. This is not necessarily the same as the credit line that will appear in a publication.
- **creditLine (pur:)** Specifies the credit line that will appear in a publication for a media asset as required by an agreement. May be tied directly to an agreement by the agreementID attribute.

Note: Both photoshop:Credit and pur:creditLine may exist for an image. The pur:creditLine is specified by a legal agreement to appear in a publication. If no pur:creditLine value exists, the photoshop:Credit may be mapped to pur:creditLine and appear in the publication.

- **DateCreated (photoshop:)** Specifies the date the image was created
- **Description (dc:)** An account of the content of the resource.
- **displayName (pmi:)** A name given to a person, object or event that is pictured
- **distributorProductID (pmi:)** Specifies the distributor’s product identifier of an object pictured.
- **embargoDate (pur:)** Earliest date (potentially including time) the resource may be made available to users or customers according to the rights agreement or to a clause in the rights agreement. May be specified by distribution platform.
- **event (prism:)** An event (social gathering, phenomenon, or more generally something that happened at a specifiable place and time).
- **eventAlias (pmi:)** Specifies an alternate name for an event.
- **eventEnd (pmi:)** Specifies the end date of an event.
- **eventStart (pmi:)** Specifies the start date of an event.
- **eventSubtype (pmi:)** Specifies the subtype of event.
- **eventType (pmi:)** Specifies the type of event.

Guide to PRISM Metadata for Images V 3.0

- **exclusivityEndDate (pur:)** The date (potentially including time) when exclusive rights to a resource ends. May be specified by distribution platform
- **expirationDate(pur:)** The date (potentially including time) by which the resource must be removed from availability to users or customers used according to a rights agreement. May be specified by distribution platform.
- **field (pmi:)** Describes the field and/or background of the image. May be used to provide direction to the photographer as well as to describe an image for archive.
- **format (dc:)** Specifies the digital format of the image.
- **framing (pmi:)** Describes how the image is framed or composed such as half length, full length, and instructions about what to include or exclude from the image. May be used to provide direction to the photographer as well as to describe an image for archive.
- **Headline (photoshop:)** A brief publishable synopsis/summary of the contents of the photograph. This is not the same as the title.
- **imageSizeRestriction (pur:)** Specifies the usage restriction on image size.
- **industry (prism:)** An industry or industry sector, referred to in order to indicate a subject of the object pictured.
- **Instructions (photoshop:)** The instructions field is a simple text field that can be used to include any of a number of instructions from the provider or creator to the receiver of the image.
- **LocationCreated (Iptc4xmpExt:)** Specifies metadata about where the image was created.
- **LocationShown (Iptc4xmpExt:)** Specifies metadata about the location shown in an image.
- **make (pmi:)** Specifies the make of an object pictured.
- **manufacturer (pmi:)** Specifies the manufacturer of an object pictured.
- **model (pmi:)** Specifies the model of an object pictured.
- **modelYear (pmi:)** Specifies the model year of an object pictured.
- **object (prism:)** The name of a physical or virtual object pictured.
- **objectDescription (pmi:)** Provides a description of the object pictured.
- **objectSubtype (pmi:)** Specifies the subtype of object pictured.
- **objectType (pmi:)** Specifies the type of object pictured.
- **optionEndDate (pmi:)** The date (potentially including time) when the option to use a resource ends. May be specified by distribution platform.
- **orientation (pmi:)** Specifies the camera orientation.
- **permissions (pur:)** A free text field used to specify special permissions for the use of a media asset.
- **person (prism:)** The proper name of a person pictured.
- **positionDescriptor (pmi:)** Description of the position of the person or object in the image; such as top left.
- **productID (pmi:)** Specifies the product identifier of an object pictured.
- **productIDType (pmi:)** Specifies the type of the product identifier of an object pictured.
- **ProvinceState (Iptc4xmpExt:)** Specifies the province/state.
- **rating (pmi)** Specifies the rating (and rating system) for this image.
- **restrictions (pur:)** A free text field used to specify special permissions for the use of a media asset.
- **reuseProhibited (pur:)** Cannot be reused.

Guide to PRISM Metadata for Images V 3.0

- **rightsAgent (pur:)** Can be used to specify the rights agent. This is a free text field so contact information may be included. The rights agent may not be the rights owner.
- **rightsOwner (pur:)** Can be used to specify the rights owner. This is a free text field so contact information may be included. The rights owner may be different from the rights agent.
- **sequenceName (pmi:)** A name given to a sequence of images for descriptive identification and reuse purposes.
- **sequenceNumber (pmi:)** The number of this image in the image sequence. If the number is greater than 0 this image is part of a sequence.
- **sequenceTotalNumber (pmi:)** The total number of images in the image sequence.
- **setting (pmi:)** Specifies the environment where the image was taken such as indoor, outdoor or studio.
- **shotID (pmi)** Specifies the creator's identifier for the shoot during which this image was captured.
- **Source (photoshop:)** Identifies the original owner of the copyright for the intellectual content of the item. This could be an agency, a member of an agency or an individual. Source could be different from the creator, rights owner or rights agent.
- **subject (dc:)** The main topic or topics of the content of the resource. Defines "aboutness".
- **Sublocation (Iptc4xmpExt:)** Either the name of a sub-location to a city, e.g. "Times Square", or the name of a well known location or natural monument outside a city, e.g. "Niagara Falls".
- **title (dc:)** Specifies the title of the image to assist with identification
- **TransmissionReference (photoshop:)** A number or identifier that was created or issued for the purpose of improving workflow handling and image tracking. This ID should be added by the creator or provider for transmission and routing purposes only and should have no significance for archiving.
- **viewpoint (pmi:)** This is an "open choice" field. PRISM provides a starter controlled vocabulary. The user may add their own values to this list.
- **visualTechnique (pmi:)** Describes the visual technique used to create the image.

Appendix B SAMPLE USER INTERFACE PANELS

XMP Custom Panels provide a user interface to support the entry of metadata into a digital image. Due to the complexity of the PMI Specification, Adobe's CS3 custom panels cannot provide write access to the hierarchy for metadata entry that is required. Appendix B describes a Pound Hill Software MetaGrove dialog (panel set) that completely implements PRISM Metadata for Images. We have included this so you can see how the fields can be implemented.

Note: The Metagrove Sample User Interface Panels can be downloaded from www.poundhill.com.

The screen shots display the MetaGrove dialog open for the example detailed in section 4.1.2.1

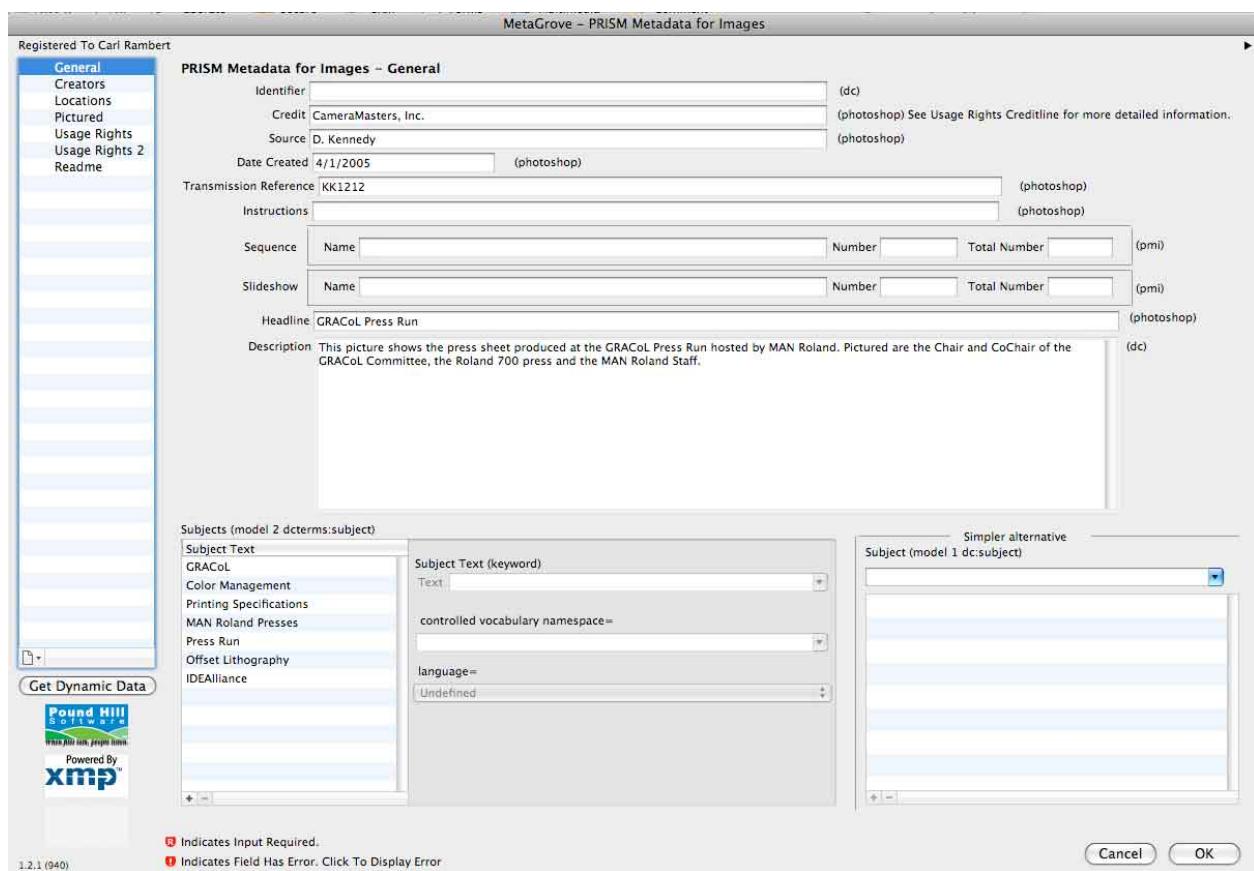


Figure B.1 General MetaGrove Panel

Pound Hill Software MetaGrove Panel

Guide to PRISM Metadata for Images V 3.0

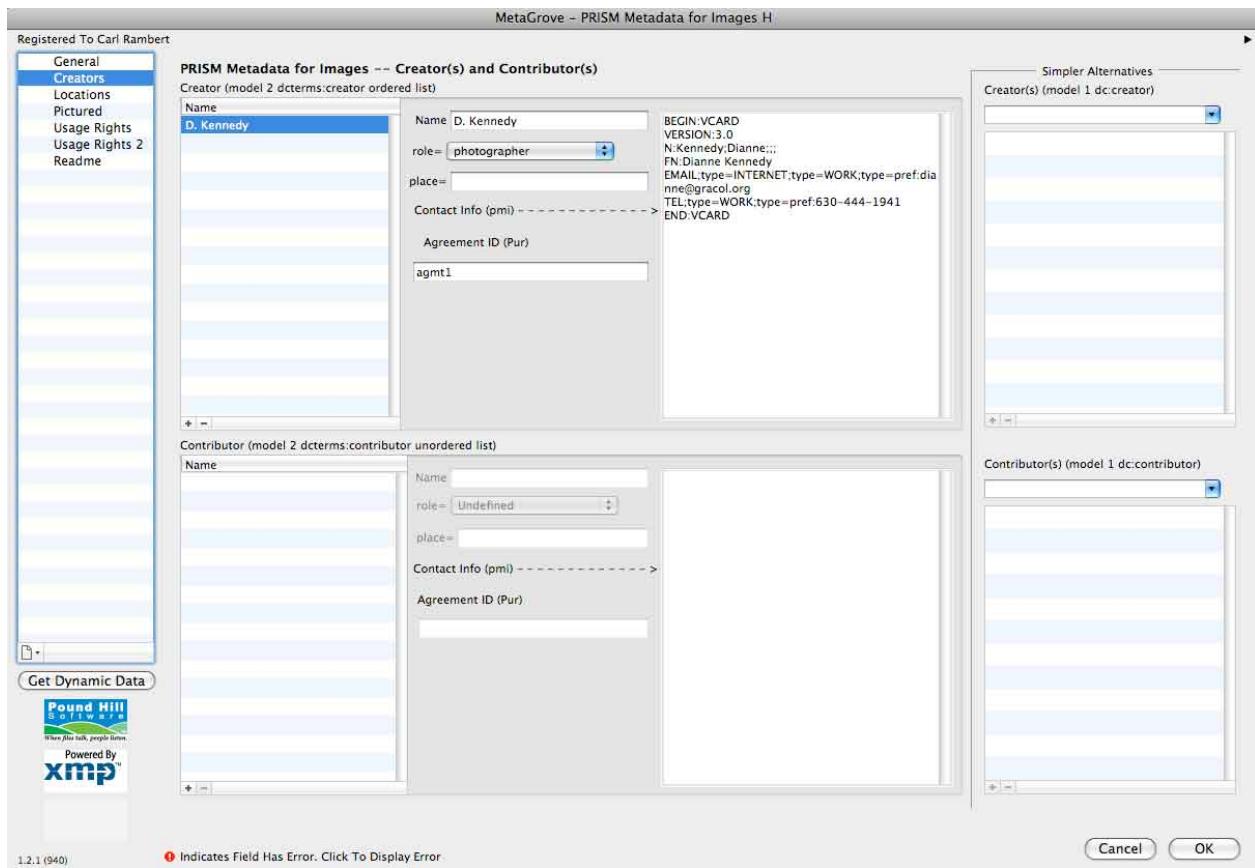


Figure B.2 Creators MetaGrove Panel

Guide to PRISM Metadata for Images V 3.0

Pound Hill Software MetaGrove Panel

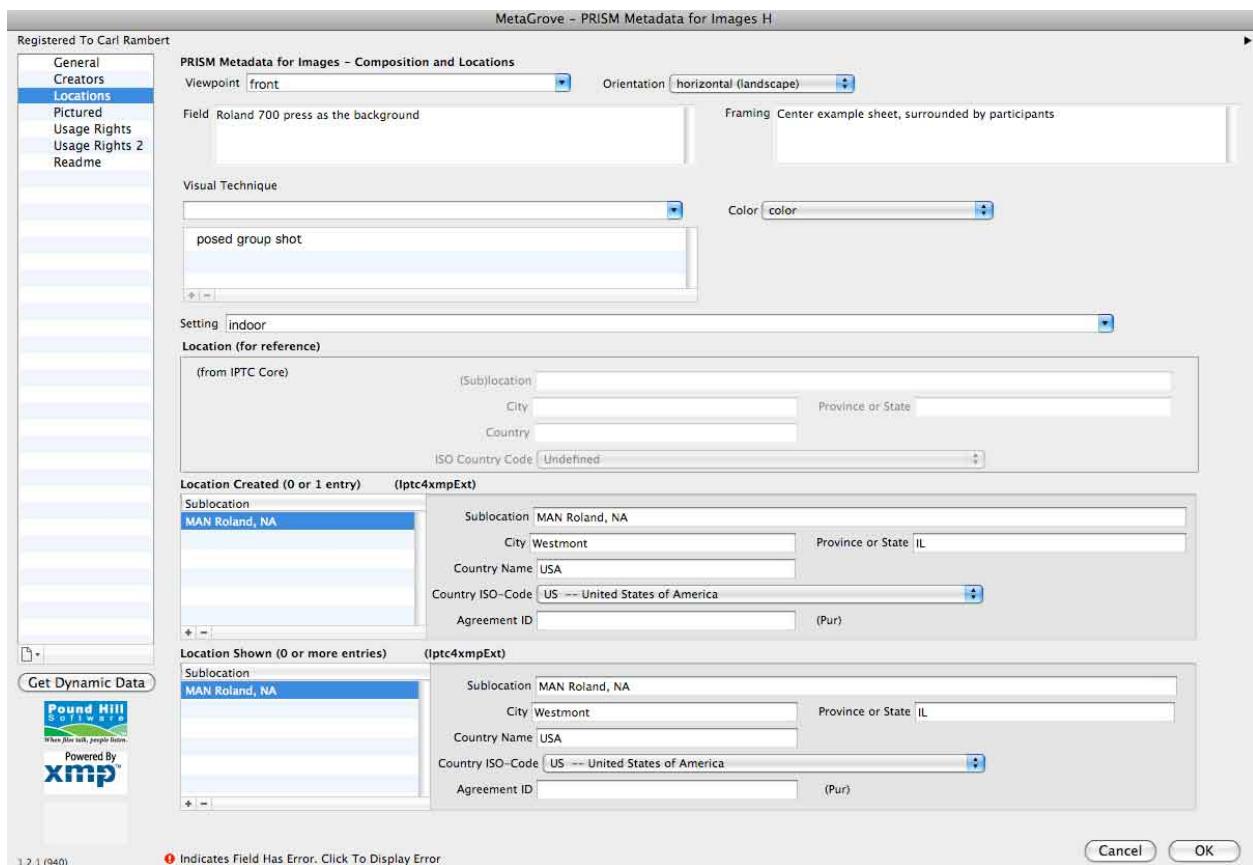


Figure B.3 Composition and Locations MetaGrove Panel

Guide to PRISM Metadata for Images V 3.0

Pound Hill Software MetaGrove Panel
MetaGrove - PRISM Metadata for Images H

Registered To Carl Lambert

PRISM Metadata for Images -- Pictured

Person(s) Pictured

Person **Don Hutcheson**
Gerry Gerlach

Contact Info
 BEGIN VCARD
 VERSION:3.0
 N:Hutcheson;Don;;;
 FN:Don Hutcheson
 EMAIL;type=INTERNET;type=pref:don@gracol.org
 TEL;type=WORK;type=pref:767-555-1212
 END VCARD

Event (Pictured) GRACol Press Run Name GRACol Press Run Alias

Event Industry
 NAICS 323110 Commercial Lithographic Printing

Event Type Test Event Contact Info
 Sub Type Press Run
 Event Start 3/31/2005 End 4/1/2005
 Season spring
 Event Agreement ID agmt2

Object(s) Pictured

Object **MAN Roland Press**
Type Printer Subtype
Description sheetfeed, offset, medium format

Industry NAICS 323110 Commercial Lithographic Printing
 Manufacturer Man Roland Make Model 700 Model Year 2005
 Product ID MRU700 Product ID Type Distributor Product ID
 Agreement ID

1.2.1 (940) ! Indicates Field Has Error. Click To Display Error

Cancel OK

Figure B.4 Pictured MetaGrove Panel

Guide to PRISM Metadata for Images V 3.0

Pound Hill Software MetaGrove Panel

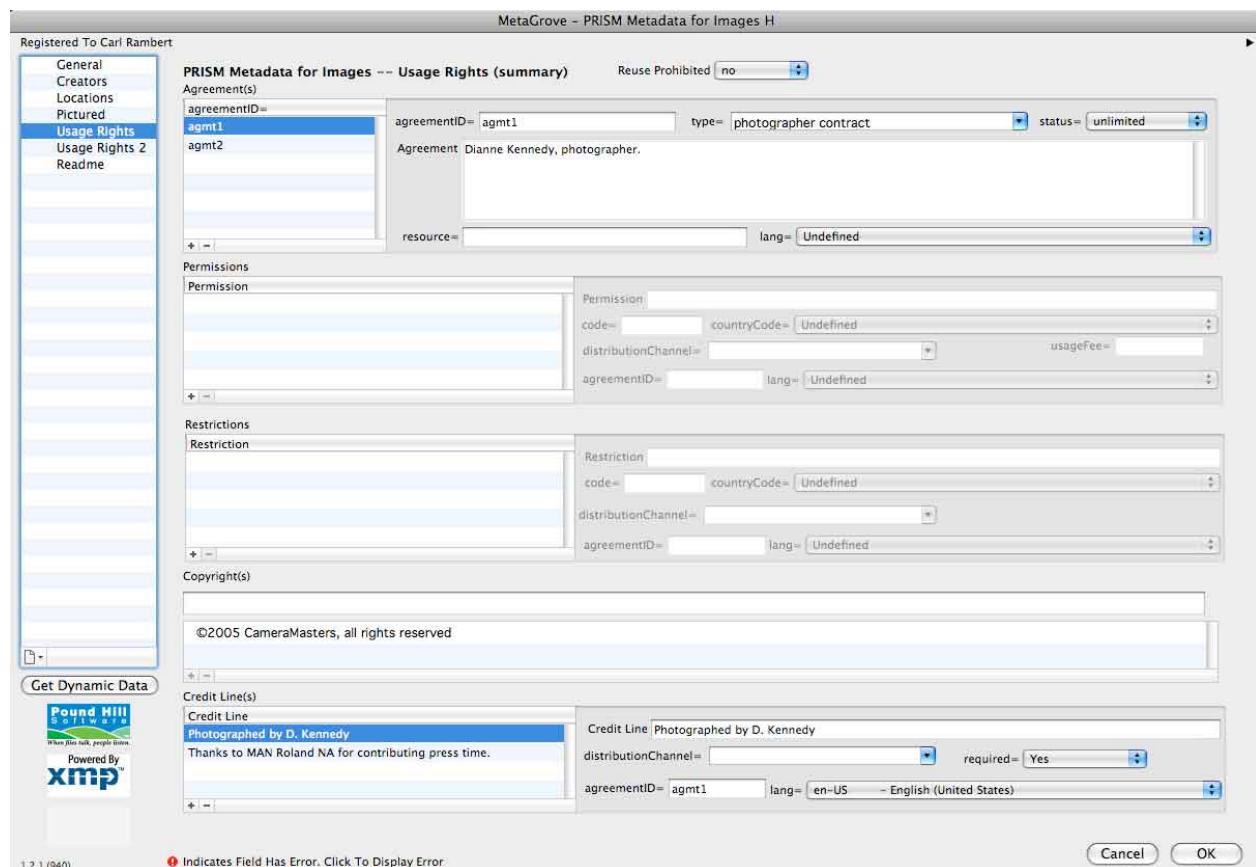


Figure B.5 Usage Rights 1 MetaGrove Panel

Guide to PRISM Metadata for Images V 3.0

Pound Hill Software MetaGrove Panel

MetaGrove – PRISM Metadata for Images H

Registered To Carl Rambert

PRISM Metadata for Images -- Usage Rights (summary) 2

Rights Agent(s)

Rights Agent

+ -

Rights Owner(s)

Rights Owner

Dianne Kennedy

+ -

Rights Agent

agreementID=

lang= Undefined

Rights Owner Dianne Kennedy

agreementID= agmt1

lang= en-US English (United States)

Expiration Date(s)

distributionChannel=

distributionChannel=

Expiration Date

agreementID=

+ -

Embargo Date(s)

distributionChannel=

distributionChannel=

Embargo Date

agreementID=

+ -

Exclusivity End Date(s)

distributionChannel=

distributionChannel=

Exclusivity End Date

agreementID=

+ -

Option End Date(s)

distributionChannel=

distributionChannel=

Option End Date

agreementID=

+ -

Image Size Restriction

Image Size Restriction

platform= Undefined

horizontalDimension=

verticalDimension=

lang= Undefined

agreementID=

+ -

Adult Content Warning(s)

Adult Content Warning

Warning

lang= Undefined

age=

distributionChannel=

countryCode= Undefined

code=

platform= Undefined

+ -

Get Dynamic Data

Pound Hill Software
When files talk, people listen.

Powered By
XMP

1.2.1 (940) ! Indicates Field Has Error. Click To Display Error

Cancel OK

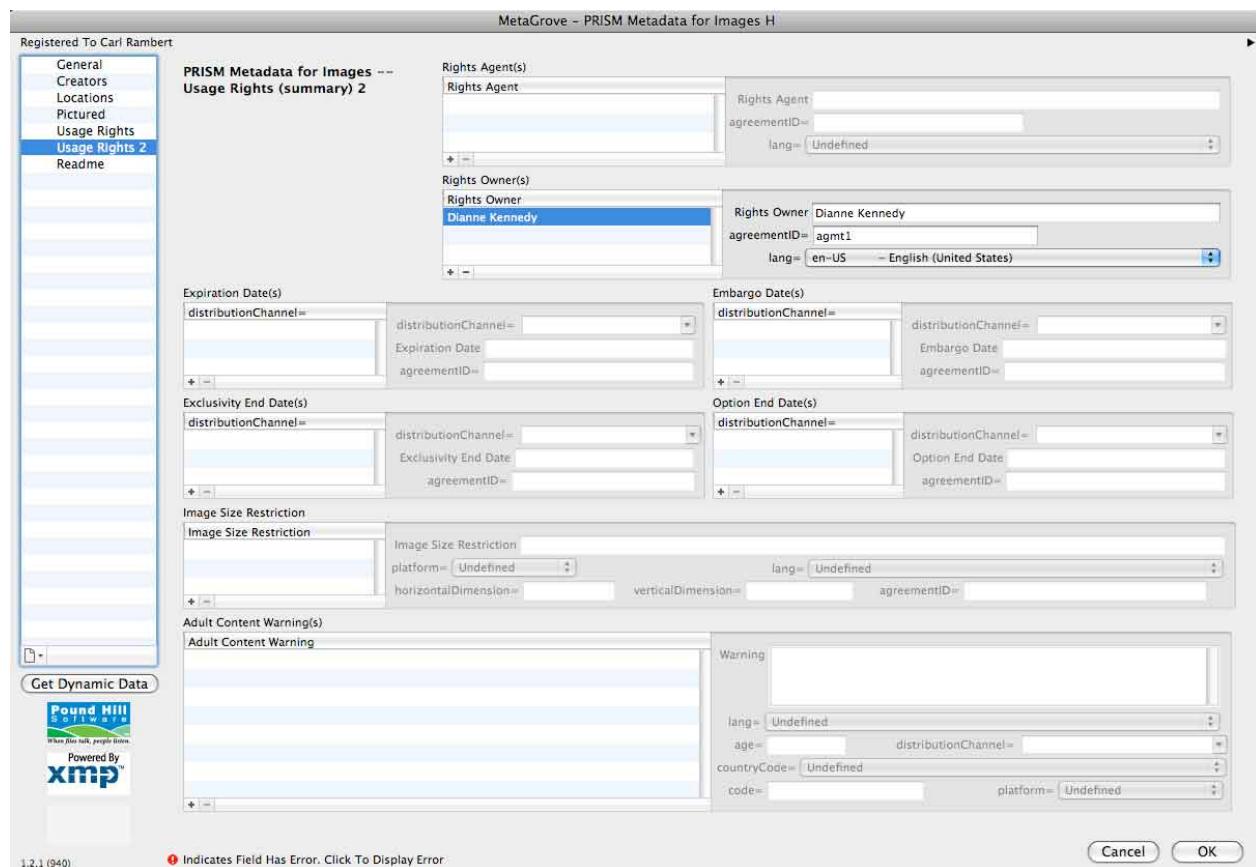


Figure B.6 Usage Rights 2 MetaGrove Panel

Appendix C SAMPLE ADOBE FILE INFO PANELS

Appendix C contains Adobe File Info v1.0 (CS3) custom Panels that are read-only (gray) for the structured properties. This set of panels can be used to view PRISM Metadata for Images in Photoshop CS through CS3, InDesign CS through CS3 Links File Info, and Acrobat 5 through 10 Image Properties. The read-only properties can be selected and copied, to be pasted into another application window.

It is feasible to build a full custom Flash/ActionScript CS5 File Info panel that is very similar to these CS3 File Info panels, but provide full write access like the MetaGrove dialog in Appendix B.

Note: Sample panels can be downloaded from www.prismstandard.org.

The screen shots display the File Info v1.0 panels open for the example detailed in section 4.1.2.1

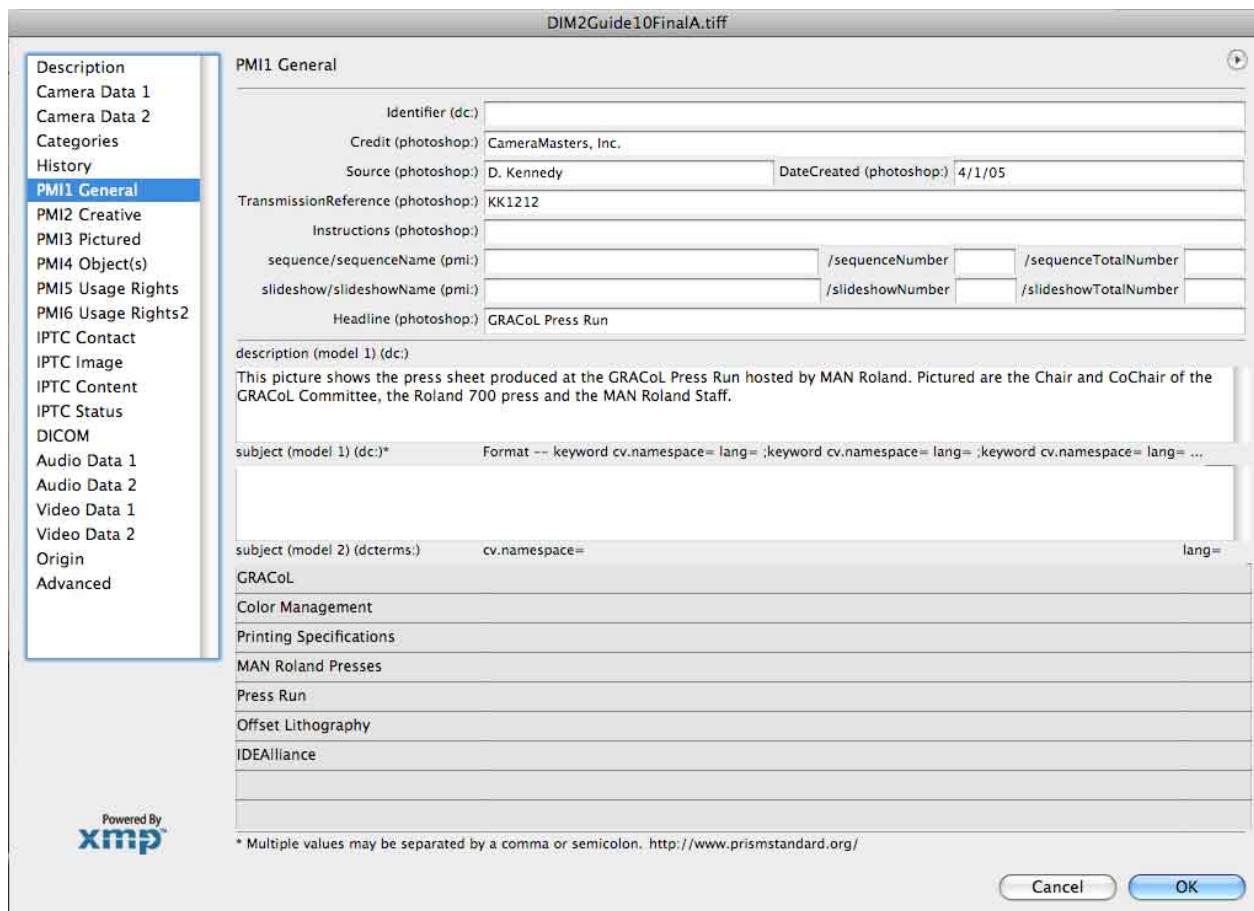


Figure C.1 General File Info Panel

Guide to PRISM Metadata for Images V 3.0

Adobe File Info v1.0 (CS3) custom Panels

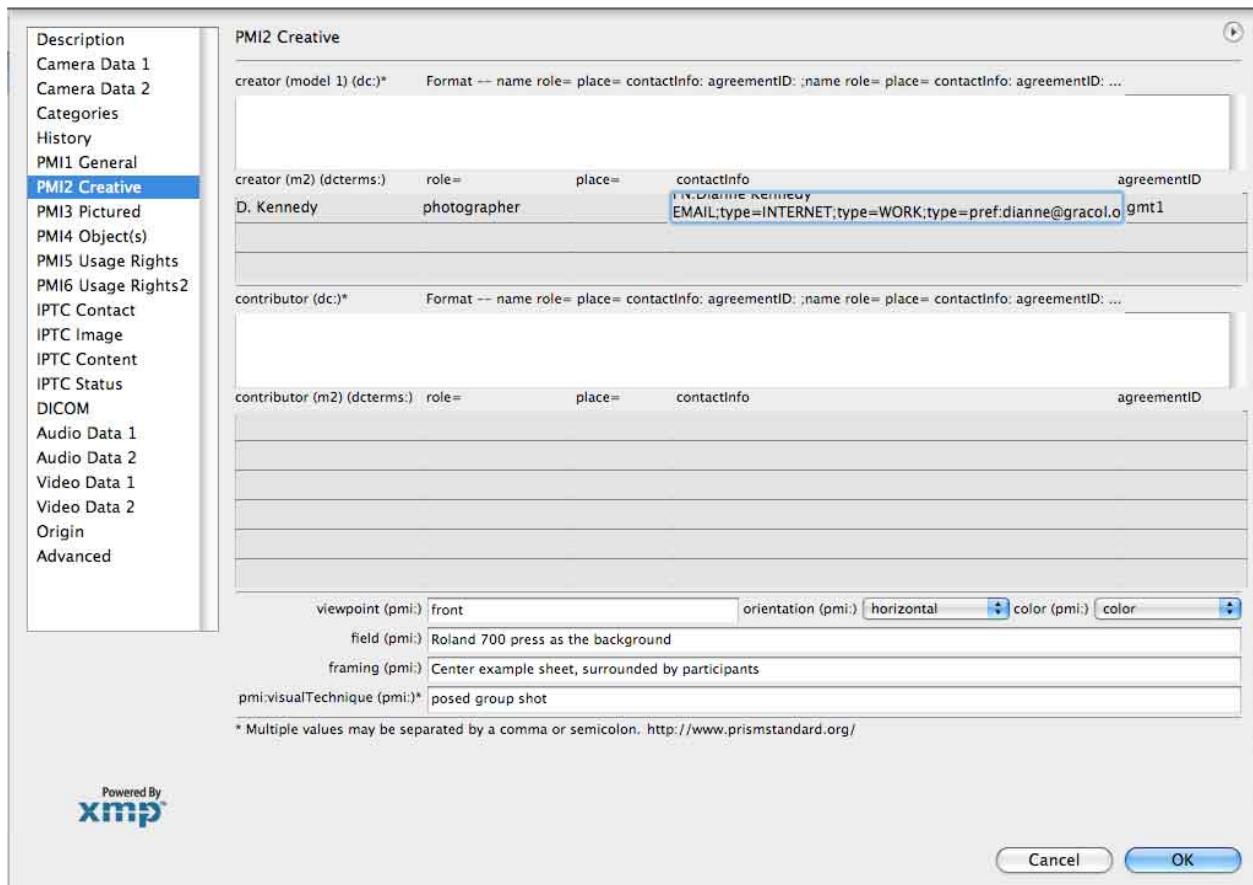


Figure C.2 Creative File Info Panel

Guide to PRISM Metadata for Images V 3.0

Adobe File Info v1.0 (CS3) custom Panels

The screenshot shows the 'PMI3 Pictured' panel within the Adobe File Info v1.0 (CS3) interface. The left sidebar lists various metadata categories, with 'PMI3 Pictured' selected and highlighted in blue. The main panel displays the following data:

PMI3 Pictured					
setting (pmi): indoor					
Location(s)	(Sub)Location	City	State	Country	CntyCode agreementID
Location (reference) (iptc4xmpCore:)					
LocationCreated	MAN Roland, NA	Westmont	IL	USA	US
LocationShown	MAN Roland, NA	Westmont	IL	USA	US
person(s)Pictured (pmi):	displayName	positionDesc	contactInfo	agreementID	
Don Hutcheson	Don Hutcheson	first row, second	MAIL;TYPE=HOME;NAME;TYPE=WORK;TYPE=PRE;don@gracol.org		
Gerry Gerlach	Gerry Gerlach	first row, right	BEGIN:VCARD		
eventPictured (pmi):	displayName	alias			
GRACol Press Run	GRACol Press Run				
event industry *					
NAICS 323110 Commercial Lithographic Printing					
event type	subType	Start	end	season	
Test	Press Run	3/31/2005	4/1/2005	spring	+ agmt2

* Multiple values may be separated by a comma or semicolon. <http://www.prismstandard.org/>

Powered By **XMP**

Cancel OK

Figure C.3 Pictured File Info Panel

Guide to PRISM Metadata for Images V 3.0

Adobe File Info v1.0 (CS3) custom Panels

The screenshot shows the 'PMI4 Object(s)' panel within the Adobe File Info v1.0 (CS3) interface. The left sidebar lists various metadata categories, with 'PMI4 Object(s)' selected. The main area displays a table with the following data:

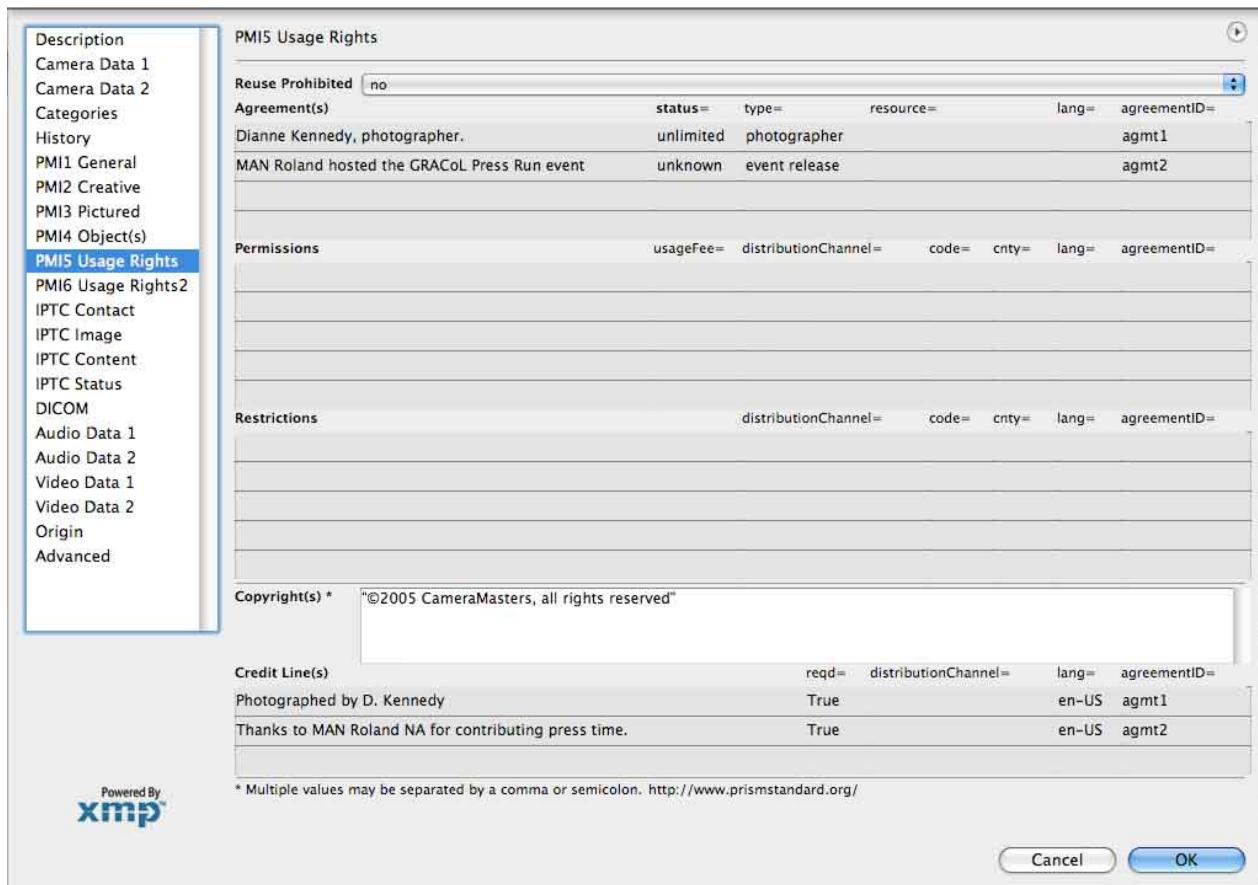
	MAN Roland Press			
(pmi:) Object Pictured	MAN Roland Press			
Display Name	MAN Roland Press			
Type	Printer			
SubType				
Description	sheetfeed, offset, medium format			
Position	background			
Descriptor				
Industry	NAICS 323110 Commercial Lithographic Printing			
Manufacturer	Man Roland			
Make				
Model	700			
Model Year	2005			
Product ID	MRU700			
Prod. ID Type				
Distributor				
Prod. ID				
Agreement ID				

At the bottom left, there is a 'Powered By xmp' logo. At the bottom right, there are 'Cancel' and 'OK' buttons.

C.4 Object(s) File Info Panel

Guide to PRISM Metadata for Images V 3.0

Adobe File Info v1.0 (CS3) custom Panels



C.5 Usage Rights 1 File Info Panel

Guide to PRISM Metadata for Images V 3.0

Adobe File Info v1.0 (CS3) custom Panels

PMI6 Usage Rights2

Rights Agent(s)	lang=	agreementID=	Rights Owner(s)	lang=	agreementID=			
			Dianne Kennedy	en-US	agmt1			
Expiration Date(s)	distributionChannel=	agreementID=	Embargo Date(s)	distributionChannel=	agreementID=			
Exclusivity End Date(s)	distributionChannel=	agreementID=	Option End Date(s)	distributionChannel=	agreementID=			
Image Size Restriction(s)			vertDim=	horizDim=	platform=	lang=	agreementID=	
Adult Content Warning(s)			age=	code=	cnty=	distributionChannel=	platform=	lang=
<small>* Multiple values may be separated by a comma or semicolon. http://www.prismstandard.org/</small>								
					Cancel	OK		

Powered By
xmp

C.6 Usage Rights 2 File Info Panel

Appendix D SAMPLE ADOBE BRIDGE METADATA PANELS

Appendix D contains Adobe Bridge Metadata Panels that are read-only (gray) for the structured properties. This set of panels can be used to view PRISM Metadata for Images in Bridge CS2 and CS3 Image Properties. The read-only properties can be selected and copied, to be pasted into another application window.

Adobe Bridge Metadata Panels display the metadata in outline format. With the preference setting of “hide empty fields” the Metadata panels provide a concise display of the PRISM Metadata for Images. Writable fields are displayed even if empty. The nested structure properties are not writable in a Metadata panel, and thus, are hidden when empty. Multiple instance properties (bag Text, seq Text, labeled with an * suffix) are not writable in the Bridge CS3 Metadata Panel.

The screen shots display the Bridge Metadata Panels for the Example detailed in section 4.1.2.1

▼ PMI1 General	
dc:identifier	
photoshop:Credit	CameraMasters, Inc.
photoshop:Source	D. Kennedy
photoshop:DateCreated	4/1/05
photoshop:TransmissionReference	KK1212
photoshop:Instructions	
pmi:sequence/sequenceName	
/..Number	
/..TotalNumber	
pmi:slideshow/slideshowName	
/..Number	
/..TotalNumber	
photoshop:Headline	GRACoL Press Run
dc:description	This picture shows the press sheet produced at the GRACoL Press Run hosted by MAN Roland. Pictured are the Chair and CoChair of the GRACoL Committee, the Roland 700 press and the MAN Roland Staff.
dcterms:subject[1]/subject.text	GRACoL
subject[2]/subject.text	Color Management
subject[3]/subject.text	Printing Specifications
subject[4]/subject.text	MAN Roland Presses
subject[5]/subject.text	Press Run
subject[6]/subject.text	Offset Lithography
subject[7]/subject.text	IDEAlliance
▼ PMI2 Creative	
dcterms:creator[1]/creator.name	D. Kennedy
role=	photographer
BEGIN:VCARD	
VERSION:3.0	
N:Kennedy;Dianne;;;	
/contactInfo	FN:Dianne Kennedy
EMAIL:type=INTERNET;type=WORK;type=pref:dianne@gracol.org	
TEL:type=WORK;type=pref:630-444-1941	
END:VCARD	
/agreementID	agmt1
Composition -- pmi:viewpoint	front
pmi:orientation	horizontal
pmi:color	color
pmi:field	Roland 700 press as the background
pmi:framing	Center example sheet, surrounded by participants
visualTechnique*	posed group shot

D.1 PMI General and Creative Bridge Metadata Panels

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Adobe Bridge Metadata Panels

▼ PMI3 Pictured	
pmi:setting	indoor
Iptc4xmpExt:LocationCreated/Sublocation	MAN Roland, NA
/City	Westmont
/ProvinceState	IL
/CountryName	USA
/CountryCode	US
Iptc4xmpExt:LocationShown[1]/Sublocation	MAN Roland, NA
/City	Westmont
/ProvinceState	IL
/CountryName	USA
/CountryCode	US
pmi:personPictured[1]/person	Don Hutcheson
/displayName	Don Hutcheson
/positionDescriptor	first row, second from the left
	BEGIN VCARD
	VERSION:3.0
	N:DonHutcheson;Don;;;
/contactInfo	FN:Don Hutcheson
	EMAIL;type=INTERNET;type=pref:don@gracol.org
	TEL;type=WORK;type=pref:767-555-1212
	END:VCARD
personPictured[2]/person	Gerry Gerlach
/displayName	Gerry Gerlach
/positionDescriptor	first row, right
	BEGIN:VCARD
	VERSION:3.0
	N:Gerlach;Gerry;;;
/contactInfo	FN:Gerry Gerlach
	EMAIL;type=INTERNET;type=WORK;type=pref:gerry@gracol.org
	TEL;type=WORK;type=pref:799-505-1200
	END:VCARD
pmi:eventPictured/event	GRACol Press Run
/displayName	GRACol Press Run
/eventAlias	
/industry *	NAICS 323110 Commercial Lithographic Printing
/eventType	Test
/eventSubType	Press Run
/eventStart	3/31/2005
/eventEnd	4/1/2005
/season	spring
/agreementID	agmt2
/contactInfo	
▼ PMI4 Object(s)	
pmi:objectPictured[1]/object	MAN Roland Press
/displayName	MAN Roland Press
/objectType	Printer
/objectDescription	sheetfeed, offset, medium format
/positionDescriptor	background
/industry	NAICS 323110 Commercial Lithographic Printing
/manufacturer	Man Roland
/model	700
/modelYear	2005
/productID	MRU700

D.2 PMI Pictured and Object(s) Bridge Metadata Panels

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Adobe Bridge Metadata Panels

The screenshot shows the Adobe Bridge Metadata Panels interface. At the top, it says "Adobe Bridge Metadata Panels". Below that, there are two sections:

▼ PMIS Usage Rights

Pur:reuseProhibited	no
Pur:Agreement[1]	Dianne Kennedy, photographer.
status	unlimited
type	photographer contract
id	agmt1
Agreement[2]	MAN Roland hosted the GRACoL Press Run event
status	unknown
type	event release
id	agmt2
Pur:copyright *	©2005 CameraMasters, all rights reserved
Pur:Credit Line[1]	Photographed by D. Kennedy
required	True
lang	en-US
agreementID	agmt1
Credit Line[2]	Thanks to MAN Roland NA for contributing press time.
required	True
lang	en-US
agreementID	agmt2

▼ PMI6 Usage Rights2

Pur:Rights Owner[1]	Dianne Kennedy
lang	en-US
agreementID	agmt1

D.3 PMI Usage Rights Bridge Metadata Panels

Appendix E SAMPLE PSV IMAGE METADATA TAGGING

Appendix E contains a sample of coding image metadata using the PSV XML tag set. Because PSV content encoding is based on HTML5, images are tagged with the HTML5 <figure> and tag. An example is shown below.

Here is an image coded in HTML5. Since HTML5 does not allow for encoding metadata within the text of an article, the metadata for images must be captured in the <psv:metadata> block. Metadata for the image is linked by the `idref=` attribute in the media component block to the `id=` attribute of that image as it appears in the HTML5 body. Note that an id has been assigned to the image so it can be linked to component metadata for that image in the <psv:metadata> element:

```
<figure class="prism:photo">
    
    <p class="prism:mediaTitle">PEAK PERFORMERS</p>
    <p class="prism:credit">ROBERT BECK</p>
    <figcaption>Gonzalez, Tulowitzki and Jimenez are all entering their primes
and locked up through at least 2014, giving the Rockies the game's best young
core.</figcaption>
</figure>
```

Here is how the metadata is coded in the <psv:metadata> element. Note that the `refines=` attribute on the <components> element links this metadata to the image in the body:

```
<?xml version='1.0' encoding='UTF-8'?>
<psv:psv>
<psv:metadata>
    <prism:contentType>article</prism:contentType>
    ...
    <psv:components refines="#10540_opy6-95787">
        <psv:componentType>image</psv:componentType>
        <dc:identifier>10540</dc:identifier>
        <dc:title>PEAK PERFORMERS</dc:title>
        <psv:creators>
            <dc:creator class="photographer">Robert Beck</dc:creator>
        </psv:creators>
        <psv:usageRights>
            <pur:reuseProhibited>no</pur:reuseProhibited/>
        </psv:usageRights>
        <psv:meta prefix="dc:" name="identifier" content="kk12012.jpg"/>
        <psv:meta prefix="dc:" name="format" content="image/jpeg"/>
        <psv:meta prefix="dc:" name="subject" content="Photo of two Rockies players
that are prime performers"/>
    </psv:mediaComponent>
</psv:components>
</psv:metadata>
```