PRISM:
Publishing Requirements for Industry Standard Metadata

Version 3.0

PRISM Introduction

October 4, 2012
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1.2 Definitions

The following terms and phrases are used throughout this document in the sense listed below. Readers will most likely not fully understand these definitions without also reading through the remainder of the PRISM documentation package.

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<th>Authority File</th>
<th>One of the forms of a controlled vocabulary, in which a list of uniquely identified entities, such as companies, authors, countries, employees, or customers, is maintained over time.</th>
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<td>Content</td>
<td>Content, as it is used in the PRISM Specification, is a non-normative term assumed to be a resource or a collection of resources.</td>
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<tr>
<td>Content Provider</td>
<td>A publisher, business, portal site, person or entity making content available in any medium.</td>
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<tr>
<td>Controlled Vocabulary</td>
<td>A list of uniquely identified terms with known meaning. The list itself has a defined maintenance procedure and restricted update access. For example, an employee database is one type of controlled vocabulary. The list of terms (staff names) is uniquely identified (employee number) and is maintained by a known procedure and staff (the HR department). There are two major types of controlled vocabularies - authority files and taxonomies.</td>
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<tr>
<td>Metadata</td>
<td>Information about a resource. In this specification, metadata is expressed as one or more properties.</td>
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<td>Property</td>
<td>A field with a defined meaning used to describe a resource. A property plus the value of that property for a specific resource is a statement about that resource. [W3C-RDF]</td>
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<td>U.S. News &amp; World Report</td>
</tr>
<tr>
<td>Schonberg, Rob</td>
<td>Conde Nast</td>
</tr>
<tr>
<td>Schut, Erik</td>
<td>WoodWing USA, Inc.</td>
</tr>
<tr>
<td>Sandler, Kathy</td>
<td>Hearst</td>
</tr>
<tr>
<td>Smith, David</td>
<td>National Geographic Global Media</td>
</tr>
<tr>
<td>Srivistava, Alok</td>
<td>Oracle Corporation</td>
</tr>
<tr>
<td>Steil, Tina</td>
<td>Meredith Corporation</td>
</tr>
<tr>
<td>Stevenson, Ed</td>
<td>Really [] Strategies</td>
</tr>
<tr>
<td>Strasbourg, Pierre</td>
<td>Publishing Connections, Inc. (PCI)</td>
</tr>
<tr>
<td>Sweet, Michael</td>
<td>Publishing Connections, Inc. (PCI)</td>
</tr>
<tr>
<td>Swenson, Ed</td>
<td>Hearst Magazines</td>
</tr>
<tr>
<td>Talis, Alex</td>
<td>Agfa Corporation</td>
</tr>
<tr>
<td>Thiebauld, Jacques</td>
<td>Dalim, Inc.</td>
</tr>
<tr>
<td>Tomer, Itai</td>
<td>Olive Software</td>
</tr>
<tr>
<td>Vetten, Lee</td>
<td>Platts, a Division of The McGraw-Hill Companies</td>
</tr>
<tr>
<td>Ware, Eric</td>
<td>Meredith Corporation</td>
</tr>
<tr>
<td>Waugh, Sunny</td>
<td>Zinio, LLC</td>
</tr>
<tr>
<td>Wolff, Jeffrey</td>
<td>formerly of Publishing Connections Inc. (PCI)</td>
</tr>
<tr>
<td>Youssef, Amre</td>
<td>Hearst Magazines</td>
</tr>
<tr>
<td>Zdanowicz, Stephen</td>
<td>Brown Printing Company</td>
</tr>
</tbody>
</table>
Resource | Text, graphics, sound, video or anything else that can be identified with a URI or other identification scheme. The PRISM Specification uses this term because it is not used in casual writing, so it can be used unambiguously in the PRISM Specification.

Statement | An assertion about a resource. Typically, statements assert that relations such as "part of" exist between resources, or that a resource has a particular value of a property, such as a "format" of "text/html".

Taxonomy | One of the forms of a controlled vocabulary, in which the uniquely identified concepts are arranged in a hierarchy that represents the relations between more specific and more general concepts.

Table 3.1: Definitions

1.3 Structure of this Document

This document is entirely non-normative. It provides an introduction and tutorial overview of the PRISM Specification. Despite being non-normative, there are occasional statements using the key words MUST, SHOULD, MAY, etc. Those statements will be repeated in other, normative documents.

This document is divided into four general sections. The first section, About PRISM 3.0 provides a general overview and establishes some of the context for the PRISM 3.0 Specification. The second section provides an overview of the PRISM Specification. The third section provides an accounting of the documentation structure for PRISM 3.0. The fourth section provides an overview of the PRISM Specification with examples. The fifth, sixth and seventh sections document the recommended PRISM namespaces, listings of domain-specific metadata vocabularies, controlled vocabularies and a bibliography.

1.4 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

1.5 Document Location

The location of this document is:
http://www.prismstandard.org/specifications/3.0/PRISM_Introduction_3.0.pdf
or
http://www.prismstandard.org/specifications/3.0/PRISM_Introduction_3.0.htm

1.6 What’s New in PRISM 3.0

The PRISM 3.0 version of the PRISM Specification includes the following changes:

1.6.1 The PRISM Documentation Package Reorganization

The PRISM Documentation Package has been reorganized and some specifications renamed to more accurately reflect the nature of each specification module. The newly reorganized modules include:

- General Documents
- PRISM Metadata Specifications
- PRISM Aggregator Message Markup Specifications
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• PRISM Controlled Vocabulary Specifications
• Additional PRISM Documentation (Guides)

1.6.2 Metadata Specifications Added for PRISM 3.0

Moving to PRISM 3.0 we will include the following new specifications:

• PRISM Advertising Metadata Specification [PRISMAMS]
• PRISM Metadata for Images Specification [PRISMMIS]
• PRISM Recipe Metadata Specification [PRISMRMS]

1.6.3 Specifications Modified for PRISM 3.0

1.6.3.1 PRISM Controlled Vocabulary Namespace Specification

PRISM Controlled Vocabulary Namespace Specification has been split into two specifications. The PRISM Controlled Vocabulary Namespace [PRISMCVNS] was a document that covers an XML Tag set for defining controlled vocabularies along with the controlled vocabularies themselves. This module was deprecated and replaced by two modules that are new in PRISM 3.0. All controlled vocabularies and their terms are documented in this publication set.

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PRISM Controlled Vocabulary Markup Specification [PRISMCVMS]</td>
<td>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]</td>
</tr>
<tr>
<td>The PRISM Controlled Vocabularies Specification [PRISMCVS]</td>
<td>The PRISM Controlled Vocabularies are now documented in this document.</td>
</tr>
</tbody>
</table>

In addition the following changes were made:

• Deprecation of the PRISM Rights CV
• Addition of the PRISM Recipe CVs
• Addition of the PRISM Image CVs
• Addition of PRISMClass CV
• Addition of PRISM Inline Class CV
• Addition of “smart phone” and “tablet” to the Platform CV
• Addition of CVs for prism:issueFrequency, prism:issueType, prism:printAdSize, prism:tabletAdType, prism:contentType
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1.6.3.2 PRISM Inline Namespace Specification

The PRISM Inline Namespace Specification [PRISMIMNS] has been Renamed PRISM Inline Markup Specification [PRISMIMS]

- The addition of a new metadata elements pim:sport, pim:academicField, pim:profession.
- The addition of a new inline metadata element pim:link.

1.6.3.3 PRISM Dublin Core Namespaces Specification

PRISM Dublin Core Namespaces Specification [PRISMDCONS] has been Renamed PRISM Dublin Core Metadata Specification [PRISMDCMS]

1.6.3.4 PRISM Namespace Specification

PRISM PRISM Namespace Specification [PRISMANNS] has been Renamed PRISM Basic Metadata Specification [PRISMBMS]

Changes in this document include:

- Addition of a new metadata field prism:contentType to describe the content type of a resource. Sample content types include article, advertisement and chapter. Values come from the new Content Type Controlled Vocabulary.
- Addition of a new metadata fields prism:sport, prism:academicField, prism:profession to further refine the dc:subject.
- Addition of a new metadata field prism:link to describe a link such as a URL, email or even twitter hashtag.
- Addition of a new metadata field prism:platform to describe a platform where content is used. Values come from the Platform Controlled Vocabulary.
- Addition of a new metadata field prism:device to further refine the definition of a platform by specifying the exact platform device such as make/model of tablet or smartphone.
- Addition of a new metadata field prism:pageProgressionDirection to describe the intended flip direction when content is displayed.
- Added new metadata fields prism:issueTeaser, prism:issueFrequency, prism:issueType, aggregateIssueNumber and pagecount
- Added new metadata fields for prism:offSaleDate, and prism:sellingAgent.
- Addition of new metadata field prism:supplementDisplayID to identify the formal supplement number.
- Addition of new metadata field prism:supplementStartingPage to identify the starting page of a supplement article.
- Addition of new metadata field prism:supplementTitle to identify the title of a supplement.
- Deprecated prism:embargoDate in favor of pur:embargoDate
- Deprecated prism:copyright in favor of pur:copyrightDate
- Deprecated prism:expirationDate in favor of pur:expirationDate
- Deprecated prism:rightsAgent in favor of pur:rightsAgent

1.6.3.5 PRISM Aggregator Message Namespace Specification

PRISM Aggregator Message Namespace Specification [PRISMANNS] has been renamed PRISM PAM Markup Specification [PRISMPAMMS]
1.6.3.6 PRISM Usage Rights Namespaces Specification

PRISM Usage Rights Namespaces Specification [PRISMURNS] has been renamed PRISM Usage Rights Metadata Specification [PRISMURMS].

1.6.3.7 PRISM Metadata for Images Namespaces Specification

PRISM Metadata for Images Namespaces Specification [PRISMMINS] has been renamed PRISM Metadata for Images Specification [PRISMMIS].

1.7 Deprecated PRL Elements

The PRISM Rights Language (PRL) namespace has superseded by new elements in the pur: namespace in version 3.0 of the specification. In the meantime, both prl: and pur: namespace elements will be available in the specification and in the PAM DTD and XSD. PRISM strongly recommends that all implementers begin transitioning from the prl: elements to the pur: namespace.

1.8 Addition of the nextPub PRISM Source Vocabulary Specifications

nextPub has developed a series of specifications collectively known as the PRISM Source Vocabulary. This Specification Set is made up of a modular documentation package that builds on PRISM 3.0. Over time new modules may be added to the documentation package. The documentation package for nextPub PRISM Source Vocabulary Version 1.0 consists of:

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRISM Source Vocabulary Specification Overview [PSVSO]</td>
<td>The Overview to the PRISM Source Vocabulary provides an introduction and a non-technical overview of the PRISM Source Vocabulary.</td>
</tr>
<tr>
<td>PRISM Source Vocabulary Specification [PSVS]</td>
<td>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.</td>
</tr>
<tr>
<td>PRISM Source Vocabulary Markup Specification [PSVMS]</td>
<td>The PSV Markup Specification documents the XML tags in the PSV namespace that are used to encode XML Source Content.</td>
</tr>
<tr>
<td>PAM to PSV Guide [PAMPSVGUIDE]</td>
<td>This Guide documents mappings from PAM XML to PSV XML. It is normative only.</td>
</tr>
</tbody>
</table>

1.9 Version History

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Release Date</th>
<th>Editor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>1/26/05</td>
<td>McConnell</td>
<td>Converted from unmodularized PRISM spec v 1.2</td>
</tr>
<tr>
<td>1.3</td>
<td>10/01/05</td>
<td>Kennedy</td>
<td>Resolved Industry Comments; added PRISM metadata to examples 1-3.</td>
</tr>
<tr>
<td>2.0</td>
<td>2/19/08</td>
<td>Kennedy</td>
<td>Adds Cross Platform Support</td>
</tr>
<tr>
<td>2.1</td>
<td>05/15/09</td>
<td>Kennedy</td>
<td>Adds Usage Rights Metadata</td>
</tr>
<tr>
<td>3.0 Public Draft</td>
<td>12/15/2011</td>
<td>Kennedy</td>
<td>Adds Image Metadata and Recipe Metadata adds support for PRISM Source Vocabulary</td>
</tr>
<tr>
<td>3.0 Public Draft</td>
<td>6/12/2012</td>
<td>Kennedy</td>
<td>All comments resolved for Final Draft</td>
</tr>
<tr>
<td>3.0 Specification</td>
<td>10/04/2012</td>
<td>Kennedy</td>
<td>Final comments resolved, final specification released</td>
</tr>
</tbody>
</table>
PRISM Introduction Version 3.0

2 INTRODUCTION TO PRISM

The PRISM (Publishing Requirements for Industry Standard Metadata) Specification defines a set of metadata vocabularies to facilitate management, aggregating, packaging, styling and delivery of content across publishing channels and platforms. PRISM provides a framework for the interchange and preservation of content and metadata, a collection of elements to describe that content, and a set of controlled vocabularies listing the values for those elements. PRISM metadata can be expressed in XML, RDF/XML, or XMP.

2.1 Purpose and Scope

The Publishing Requirements for Industry Standard Metadata (PRISM) specification defines a set of XML metadata vocabularies for syndicating, aggregating, post-processing and multi-purposing magazine, news, newsletter, marketing collateral, catalog, mainstream journal content, online content and feeds. PRISM provides a framework for the interchange and preservation of content and metadata, a collection of elements to describe that content, and a set of controlled vocabularies listing the values for those elements.

Metadata is an exceedingly broad category of information covering everything from an article's country of origin to the fonts used in its layout. PRISM's scope is driven by the needs of publishers to receive, track, and deliver multi-part content. The focus is on additional uses for the content, so metadata concerning the content's appearance is outside PRISM's scope. The Working Group focused on metadata for:

- General-purpose description of a resources on a delivery platform basis
- Specification of a resource's relationships to other resources
- Definition of intellectual property rights and usage based on rights
- Expressing inline metadata (that is, markup within the resource itself)

Like the Information and Content Exchange protocol [ICE], PRISM is designed be straightforward to use over the Internet, support a wide variety of applications, not constrain data formats of the resources being described, conform to a specific XML syntax, and be constrained to practical and implementable mechanisms.

The PRISM group’s emphasis on implementable mechanisms is key to many of the choices made in this specification. For example, the elements provided for describing intellectual property rights are not intended to be a complete, general-purpose rights language that will let unknown parties do business with complete confidence and settle their accounts with micro-transactions. Instead, it provides elements needed for the most common cases encountered when one publisher of information wants to reuse material from another. Its focus is on reducing the cost of compliance with existing contracts that have been negotiated between a publisher and their business partners.

2.2 Relationship to Other Specifications

Because there are already so many standards, the emphasis of the PRISM group was to recommend a coherent set of existing standards. New elements were only to be defined as needed to extend that set of standards to meet the specific needs of the magazine publishing scenarios. This section discusses the standards PRISM is built upon, how it relates to some other well-known standards, and how subsequent standards can build upon this specification.
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2.2.1 Extensible Markup Language (XML)

PRISM metadata documents are an application of XML [W3C-XML]. Basic concepts in PRISM are represented using the element/attribute markup model of XML. The PRISM Specification makes use of additional XML concepts, such as namespaces [W3C-XML-NS].

2.2.2 Resource Description Framework (RDF)

The Resource Description Framework [W3C-RDF] defines a model and XML syntax to represent and transport metadata. PRISM profile two compliance uses a simplified profile of RDF for its metadata framework. Thus, PRISM profile #2 compliant applications will generate metadata that can be processed by RDF processing applications. However, the converse is not necessarily true. The behavior of applications processing input that does not conform to this specification is not defined.

2.2.3 Digital Object Identifier (DOI)

A digital object identifier (or DOI) is a permanent identifier given to a document, which is not related to its current location. A typical use of a DOI is to give a scientific paper or article a unique identifying number that can be used by anyone to locate details of the paper, and possibly an electronic copy. In this way it functions as a permanent link. Unlike the URL system used on the Internet for web pages, the DOI does not change over time, even if the article is relocated (provided the DOI resolution system is updated when the change of location is made). The International DOI Foundation (IDF), a non-profit organization created in 1998, is the governance body of the DOI System, which safeguards all intellectual property rights relating to the DOI System. The DOI Handbook [DOI-HB] (Version 4.4.1, released 5 October 2006) is the primary source of information about the DOI System. It discusses the components and operation of the system, and provides a central point of reference for technical information. The Handbook is updated regularly.

2.2.4 Dublin Core (DC)

The Dublin Core Metadata Initiative [DCMI] established a set of metadata to describe electronic resources in a manner similar to a library card catalog. The Dublin Core includes 15 general elements designed to characterize resources. PRISM uses the Dublin Core and its relation types as the foundation for its metadata. PRISM also recommends practices for using the Dublin Core vocabulary. In addition, Dublin Core has developed an additional metadata set called Dublin Core Terms. PRISM uses elements from this metadata set as deemed appropriate by the Working Group.

2.2.5 NewsML

NewsML [IPTC-NEWSML] is a specification from the International Press Telecommunications Council (IPTC) aimed at the transmission of news stories and the automation of newswire services. PRISM focuses on describing content and how it may be reused. While there is some overlap between the two standards, PRISM and NewsML are largely complementary. PRISM’s controlled vocabularies have been specified in such a way that they can be used in NewsML. PRISM Profile #1 compliance permits the incorporation of PRISM elements into NewsML, should the IPTC elect to do so. The PRISM Working Group and the IPTC are working together to investigate a common format and metadata vocabulary to satisfy the needs of the members of both organizations.
2.2.6 News Industry Text Format (NITF)

NITF [IPTC-NITF] is another IPTC specification. NITF provides a DTD designed to mark up news feeds. PRISM is a set of metadata vocabularies designed to describe magazine, newsletter and journal based resources and their relationships to other resources. While there is some overlap between NITF and PRISM, they are designed for different types of content. PRISM is more applicable to magazine, newsletter and journal based content.

2.2.7 nextPub® Initiative

A Working Group of the IDEAlliance nextPub Initiative has developed the new PRISM Source Vocabulary Specification that defines XML elements and attributes in the psv: namespace to encode semantically rich source content. Metadata fields and values used in this specification are drawn from the IDEAlliance PRISM 3.0 Metadata and Controlled Vocabulary Specifications. Content encoding is based on HTML5.

2.2.8 Information and Content Exchange (ICE)

The Information and Content Exchange protocol manages and automates syndication relationships, data transfer, and results analysis. PRISM complements ICE by providing an industry-standard vocabulary to automate content reuse and syndication processes. To quote from the ICE specification [ICE]:

Reusing and redistributing information and content from one Web site to another is an ad hoc and expensive process. The expense derives from two different types of problem:

- Before successfully sharing and reusing information, both ends need a common vocabulary.
- Before successfully transferring any data and managing the relationship, both ends need a common protocol and management model.

Successful content syndication requires solving both halves of this puzzle.

Thus, there is a natural synergy between ICE and PRISM. ICE provides the protocol for syndication processes and PRISM provides a description of the resource being syndicated, which can be used to personalize the delivery of content to tightly-focused target markets.

2.2.9 RSS (RDF Site Summary) 1.0

RSS (RDF Site Summary) 1.0 [RSS] is a lightweight format for syndication and descriptive metadata. Like PRISM, RSS is an XML application, conforms to the W3C's RDF Specification and is extensible via XML-namespaces and/or RDF based modularization. The RSS-WG is currently developing and standardizing new modules.

The primary application of RSS is as a very lightweight syndication protocol for distributing headlines and links. It is easy to implement, but does not offer the syndication management and delivery confirmation features of ICE.

2.2.10 XMP (Extensible Metadata Platform)

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. However, the XMP subset of RDF is significantly different from the PRISM RDF subset. Therefore, PRISM Profile #3 has been added to enable PRISM/XMP compliant implementations.
2.2.11 Ghent Work Group Ad Ticket and AdsML

Wherever possible the metadata fields defined for advertising are based on the Ghent Work Group (GWG) ad ticket V1.2 metadata fields, which in turn are based on fields defined for the industry by AdsML. It is important to note that the PRISM advertising metadata specifications have been driven by North American publishers to meet their specific needs. If unique fields are required for this market, these fields will be brought to GWG for inclusion on the next major revision of their Ad Ticket specification, V2.0. Mapping from this specification to GWG is included in the documentation for each field.

2.2.12 Ad-ID

Ad-ID has participated in the development of the PRISM Advertising Metadata Specification and a mapping for fields in this specification to fields included in the Ad-ID specification is included in the documentation for each field.

It is important to note that Ad-ID describes the advertisement to be placed but not about the actual placement. So it makes sense that no mappings are available that describe the ad placement.

2.2.13 Future PRISM Metadata Specifications

PRISM defines XML metadata fields and controlled vocabularies in domain-specific specifications. The metadata fields are grouped by function and modularized by namespaces. As use of PRISM metadata evolves, new metadata sets in new namespaces will be added. Candidate metadata specifications for the next version of PRISM include metadata for advertising, metadata for short-form video, metadata for projects from crafts, quilting, knitting to home repair, metadata for marketing and product description and metadata to describe the demographic audience for both content and advertising.

2.2.14 Future PRISM-Based XML Tag Sets

In addition to defining metadata vocabularies, the PRISM Working Group may define a specific use case and develop an XML tag set to code both content and metadata fields may be developed. Currently PRISM has developed the PRISM Aggregator Message tag set, a tag set to define a controlled vocabulary, a usage rights tag set and a tag set for recipes. The nextPub initiative has also defined the PRISM Source Vocabulary (PSV) tag set based on PRISM. Other applications of PRISM, requiring the development of an XML tag set may be defined in the future.

2.3 About XML

Extensible Markup Language (XML) [W3C-XML] is a W3C data encoding language. XML can be used to describe metadata as elements with attributes and element content. When using XML by itself, relationships between metadata elements can only be expressed through the order, frequency and hierarchy of the elements and their attributes. Well-formed PRISM XML provides the simplest model for encoding PRISM metadata.

PRISM Profile 1 simply requires the use of well-formed XML. If a schema is added, as in the case of the PRISM Aggregator Message, the model becomes constrained in ways well-formed XML is not. The XML expression of PRISM along with best practice recommendations are documented in Section 4 of this document.
2.4 About RDF

The Resource Description Framework (RDF) is a W3C language [W3C-RDF] for representing information about resources in the World Wide Web but can be used to represent information about any resource that can be identified with a URI, or Uniform Resource Identifier. It is particularly useful for representing metadata about resources, such as the title, author modification date of a digital asset and copyright and licensing information for a resource. RDF describes resources in terms of simple properties and property values.

The underlying structure of any expression in RDF is a triple consisting of a Subject, a Predicate and an Object. A set of such triples is called an RDF graph. Figure 2.1 shows a node and directed-arc diagram of a single triple.

![Figure 2.1 RDF Graph](image)

The Predicate specifies a characteristic or property of the Subject. The Object provides the value for the property. For example: The “Big Book of Poems” was authored/created by “D. Kennedy”. Here the Subject is the Big Book of Poems. The Predicate or Property we are describing is “was created by” and the value of the property, or Object, is “D. Kennedy”. See Figure 2.2.

![Figure 2.2 Sample RDF Graph](image)

Subject nodes and predicates must be URIs. An object node may be a URI reference, a literal, or blank (having no separate form of object identification itself).

When expressing RDF in XML, we express the nodes, properties and property values with XML elements and attributes. When using XML to represent RDF triples, there is far greater flexibility in tagging than we are used to when we define XML elements and attributes with an XML DTD. RDF is designed to represent information in a minimally constraining, flexible way. The impact of combining XML with RDF is that several XML representation models can exist for the same RDF Graph. In other words, the content model and attributes can vary in a way that is not easy to define using an XML DTD. This is a bit foreign to those from a strict XML world where elements have one fixed content model and attribute definition. And it makes writing documentation for XML/RDF elements and attributes quite challenging.

Consider the following options that RDF offers when expressed as XML:
2.4.1 Specifying RDF Nodes

A URI reference, a literal, or a hierarchy of elements can be used to indicate what a node represents or is used to give the node a value. The tagging of the graph in XML differs depending upon our model for providing Node property values:

Example 2.1 Literal provides Node value for the dc:description property

Example 2.2 URI Reference provides Node value for the dc:description property

2.4.2 URI References

RDF allows property values to be represented by a literal or by a URI. Each representation has different characteristics, so it is important to know about those characteristics in order to make the right design choice. The advantage of URIs over literals is their lack of ambiguity. Literals however are often simpler and more convenient. But either option is valid and is documented in the PRISM Specification.

2.4.3 Literals

To complicate matters even further, there are different types of literals in RDF. These must be coded differently in XML and an RDF processor will handle them differently. To start with, literals may be plain or typed:

2.4.3.1 Plain Literals

A plain literal is a string combined with an optional language tag (xml:lang). This may be used for plain text in a natural language. As recommended in the RDF formal semantics [RDF-SEMANTICS], these plain literals are self-denoting. This means that we do not have to specify a plain literal to an RDF processor; it simply assumes it is dealing with this literal type.

2.4.3.2 Typed Literal

A typed literal is a string combined with a datatype URI. It denotes the member of the identified datatype’s value space obtained by applying the lexical-to-value mapping to the literal string.

Datatypes are used by RDF in the representation of values such as integers, floating point numbers and dates. There is no built-in concept of numbers or dates or other common values in RDF. Rather, RDF defers to datatypes that are defined separately, and identified with URI references. The predefined XML Schema datatypes [XML-Schema2] are widely used for this purpose.

Example 2.3 Typed literal for prism:embargoDate
2.4.3.3 XML Literals

Some literals contain XML markup. **XML literals** is a string combined with a rdf:parseType=""literal"" attribute that indicates a fragment of XML is embedded. This signals the RDF processor to handle the literal as an XML fragment.

```xml
<dc:description rdf:parseType="Literal">
  Describes the infamous criminal and gunfighter, 
  <em>Billy the Kid</em>.  
</dc:description>
```

Example 2.4 Using an XML Literal

2.4.4 Nodes Made of Elements

A third kind of node is known as a **blank node**. This is a node that does not have properties specified with a URI or a literal, but is made up of other elements that themselves have properties. See Figure 1.3.

![RDF Graph with a Blank Node](image)

Figure 2.3 RDF Graph with a Blank Node

A blank node must have the rdf:parseType="Resource" attribute on the containing property element to turn the property element into a property-and-node element, which can itself have both property elements and property attributes.

```xml
<dc:rights rdf:parseType="Resource">
  <prism:expirationDate>2001-04-09</prism:expirationDate>
  <prism:embargoDate>2001-05-09</prism:embargoDate>
</dc:rights>
```

Example 2.4 Blank Node with rdf:parseType="Resource" attribute

While a blank node can occur anywhere within PRISM metadata fields, some elements from the PRISM subset of Dublin Core are more likely to be modeled as blank nodes than others. These elements are listed in Table 2.1.

<table>
<thead>
<tr>
<th>Name</th>
<th>Identifier</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>dc:description</td>
<td>The description may be modeled as being made up of a number of other elements from other namespaces. For example, one might model dc:description using dc:abstract and dc:educationLevel.</td>
</tr>
</tbody>
</table>
### 2.4.5 Grouped Property Values

There is often a need to describe groups of things as a property value. If the “Big Poetry Book” was created by several authors, 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 [XMP] uses these mechanisms when multiple field 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.

First, RDF provides a container vocabulary consisting of three predefined types (together with some associated predefined properties). A container is a resource that contains a group of values. Containers include:

#### 2.4.5.1 RDF Bag

A Bag (a resource having type rdf:Bag) represents a group of property values where there is no significance to the order of the members. A Bag might be used to describe a group of authors in which the order of entry or processing does not matter.

#### 2.4.5.2 RDF Sequence

A Sequence or Seq (a resource having type rdf:Seq) represents a group of property values where the order of the members is significant. For example, a Sequence might be used to describe a group that must be maintained in alphabetical order.

#### 2.4.5.3 RDF Alternative

An Alternative or Alt (a resource having type rdf:Alt) represents a group of property values that are alternatives (typically for a single value of a property). For example, an Alt might be used to describe alternative names for an author.

The members of the container can be described by defining a container membership property for each member. These container membership properties may have names of the form rdf:_n, where n is a decimal integer greater than zero, with no leading zeros, e.g., rdf:_1, rdf:_2, rdf:_3, and so on, and are used specifically for describing the members of containers. Or the container membership properties may have names of the form rdf:li (list item) for the convenience of not having to explicitly number each membership property.

Grouped Property Values are not used in any examples within this document. Note, however, that these RDF structures may be used with metadata fields defined for the `dc:` namespace. See Example 2.5.

```xml
<?xml version="1.0"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:dc="http://purl.org/dc/elements/1.1/"
    <rdf:Description rdf:about="http://example.org/courses/6.001">
    <dc:creator>
```
Example 2.5 RDF Container Elements

### 2.4.6 XML/RDF Content and Attribute Models

XML/RDF content and attribute models are defined with keywords in Table 2.2 for use in documenting the XML/RDF Elements and Attributes within PRISM.

<table>
<thead>
<tr>
<th>Representation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>URI Resource</td>
<td>This specifies that the property element (that is, the element specifying a particular property of the subject) is EMPTY and that the value is specified using a URI Resource attribute value.</td>
</tr>
<tr>
<td>Authority Reference</td>
<td>This specifies that the property value is specified using a kind of URI Reference where the attribute, “rdf:resource,” has a value that is a URI referring to a term in a controlled vocabulary.</td>
</tr>
<tr>
<td>Resource Reference</td>
<td>This specifies the requirement of the attribute, “rdf:resource,” whose value is a URI reference to a resource. The set of Authority References is a subset of the set of Resource References.</td>
</tr>
<tr>
<td>Plain Literal</td>
<td>This specifies that a plain literal will be used to provide the property value within an element.</td>
</tr>
<tr>
<td>Enumerated Literal</td>
<td>This specifies that a plain literal with specifically enumerated values will be used to provide the property value within an element. Note that RDF does not support the concept of an enumerated literal, but XSD, RNG, and DTD attribute specifications do.</td>
</tr>
<tr>
<td>XML Literal</td>
<td>This specifies that an XML literal content model will be used to specify the property value within an element. In this case, the rdf:parseType must be specified as “Literal.”</td>
</tr>
<tr>
<td>Typed Literal</td>
<td>This specifies that a typed literal is being used to specify the property value within an element. The attribute rdf:datatype must be specified to indicate the datatype of the element content.</td>
</tr>
<tr>
<td>Resource Node</td>
<td>This specifies that the property element contains other property element nodes. The attribute rdf:parseType must be specified to be “Resource.”</td>
</tr>
</tbody>
</table>

Table 2.2 Keywords for XML/RDF Element and Attribute Definitions

### 2.5 About XMP

The Extensible Metadata Platform [XMP](https://www.adobe.com/products/xmp.html), developed by Adobe Systems and fostered by the open industry XMP-Open initiative of IDEAlliance provides for a unique implementation of XML and RDF. The profile of RDF specified within the XMP Specification differs in some ways from the RDF profile recommended by PRISM. But because XMP provides for an implementation for embedding RDF/XML metadata into a wide variety of multimedia objects, PRISM adopted XMP as a third compliance profile in 2007. XMP provides the unique ability to facilitate PRISM implementation in the multimedia environment. XMP fields are documented as PRISM Profile three in Section 4 of this document.
**PRISM Introduction Version 3.0**

### 2.5.1 XMP Schemas

An XMP schema is a set of properties. Each schema is identified by means of a *namespace* (which follows the usage of XMLnamespaces) to avoid conflict between properties in different schemas that have the same name but different meanings. XMP properties follow the form of *prefix:name*. For PRISM XMP, the PRISM namespaces can be duplicated directly when constructing XMP schemas; for example, prism:number.

### 2.5.2 XMP Value Types

For XMP, data types that can represent the values of XMP properties required by PRISM are typed as follows:

- **Text**: A Unicode string.
- **Integer**: A numeric string used as an integer number representation.
- **ProperName**: A name of a person or organization, represented as a Unicode text string.
- **Date**: A date which is represented as a W3C dateTime.
- **Boolean**: A value chosen from “True” or “False” (strings spelled exactly as shown).
- **Choice**: A value chosen from a *controlled vocabulary* of values such as a PRISM controlled vocabulary.
- **URL**: An Internet Uniform Resource Locator.

### 2.5.3 XMP Arrays

When more than one metadata field is allowed, it is represented in XMP by an array, or a group of property values. XMP arrays are expressed using RDF containers. XMP supports rdf:Bag, rdf:Alt and rdf:Seq. The container structure should be expressed when developing an XMP schema.

### 2.5.4 Embedding XMP in Files

The XMP Specification details how XMP may be embedded in the following media files:

- TIFF
- JPEG
- JPEG 2000
- GIF
- PNG
- HTML
- PDF
- AI (Adobe Illustrator)
- SVG/XML
- PSD (Adobe Photoshop)
- PostScript and EPS

*Note: Current XMP capabilities for these file types must be verified with the tool set you intend to use.*

### 2.6 About HTML5

HTML5 [HTML5] is gaining credibility as a delivery platform for publications, not only on the Web but as an alternative to the publication apps that we see today on tablets and smart phones. In addition, EPUB3 is using HTML5 as the base content format for EPUB3 [EPUB3]. The IDEAlliance nextPub initiative, while basing its
PRISM Source Vocabulary metadata on PRISM 3.0, is implementing an HTML5-compliant head and body for content encoding.

2.7 Relationship of PRISM to the PRISM Aggregator Message

PAM is the PRISM Aggregator Message documented in the PRISM PAM Guide [PAMGUIDE]. The use case for PAM is to encode magazine articles in XML to deliver content to aggregators. PAM is an XML tag set built on the foundation of PRISM metadata and controlled vocabularies. PAM is an application of PRISM, but PAM and PRISM are not synonymous. PAM is an XML tag set that uses PRISM metadata for a very specific purpose while PRISM remains the core specification for metadata and controlled vocabularies. See Figure 1.4.

2.8 Relationship of PRISM to the PRISM Source Vocabulary

PAM is the PRISM Aggregator Message. The use case for PAM was originally to encode magazine articles in XML to deliver content to aggregators. While some publishers currently use PAM XML as a content source, that was not the original intent. Now a new use case, to encode semantically rich content for transformation and delivery to any platform has led to the development of a new XML tag set, the PRISM Source Vocabulary, or PSV. PSV, like PAM is also built on the foundation of PRISM metadata and controlled vocabularies, But PSV and PAM are not the same. Each has a very specific use case and each is a different XML tag set. See Figure 1.4.

Figure 2.4 Relationship between PRISM, PAM and PSV
Redundancy is a necessary consequence of re-using existing work. For example, when sending PRISM data in an ICE payload, there will be duplication of PRISM timestamp information and ICE header data. Therefore, in some cases, the same information will be specified in more than one place. This is normally a situation to be avoided. On the other hand, PRISM descriptions need to be able to stand alone, so there is no way to optimize PRISM’s content for a particular protocol. The working group decided that redundancy should neither be encouraged nor avoided.

PRISM does not specify or impose a standard interchange format for metadata or content. There are many ways to exchange the descriptions and the content they describe. Developers of such interchange protocols should consider the following factors:

- Easily separable content: A tool that provides metadata will need to get at this information quickly. If metadata is mixed with content, these tools will have to always scan through the content. On the other hand, it is significantly easier to keep the metadata associated with the content if it is mixed in (as a header, for example).
- Reference vs. Inline content: Referencing content is visually clean, but presents a challenge with access (security, stale links, etc). Inline requires larger data streams and longer updates in the face of changes.
- Encoding. Depending on the choice of format, encoding of the content may be necessary. Extra computation or space will be needed.

The PRISM Specification deliberately does not address security issues. The working group decided that the metadata descriptions could be secured by whatever security provisions might be applied to the resource(s) being described. PRISM implementations can achieve necessary security using a variety of methods, including:

- Encryption at the transport level, e.g., via SSL, PGP, or S/MIME.
- Sending digitally signed content as items within the PRISM interchange format, with verification performed at the application level (above PRISM).

The PRISM Specification does not address the issue of rights enforcement mechanisms. The working group decided that the most important usage scenarios at this time involved parties with an existing contractual relationship. This implied that the most important functionality required from PRISM’s usage rights elements was to reduce the costs associated with clearing rights, not to enable secure commerce between unknown parties. Therefore the PRISM Specification provides mechanisms to describe the most common rights and permissions associated with content, but does not specify the means to enforce compliance with those descriptions. Essentially, the goal is to make it less expensive for honest parties to remain honest, and to let the courts serve their current enforcement role.
2.9.5 Compliance

PRISM compliance has been defined to include three forms or "profiles." These profiles are defined in a separate document, PRISM Compliance [PRISMCOMP]. Every effort has been made to edit other sections of the PRISM documentation package in order to reflect this important change, but it is possible that language may still exist, in either normative or non-normative sections, that is in conflict with the new definitions of compliance. Should the reader encounter any such ambiguity, he or she may assume that PRISM Compliance is authoritative.
3 PRISM DOCUMENTATION STRUCTURE

PRISM is described in a set of formal, modularized documents that, taken together, represent “the PRISM Specification”. Together these documents comprise the PRISM Documentation Package.

3.1 Normative and Non-normative Sections

Documents in the PRISM Documentation Package may contain both normative and non-normative material; normative material describes element names, attributes, formats, and the contents of elements that is required in order for content or systems to comply with the PRISM Specification. Non-normative material explains, expands on, or clarifies the normative material, but it does not represent requirements for compliance. Normative material in the PRISM Documentation Package is explicitly identified as such; any material not identified as normative can be assumed to be non-normative.

3.2 The PRISM 3.0 Documentation Package

The PRISM Documentation Package consists of:

3.2.1 General Documents

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

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRISM Introduction [PRISMIN]</td>
<td>Overview, background, purpose and scope of PRISM; examples; contains no normative material.</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_introduction_3.0.pdf">http://www.prismstandard.org/specifications/3.0/PRISM_introduction_3.0.pdf</a></td>
<td>or</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_introduction_3.0.htm">http://www.prismstandard.org/specifications/3.0/PRISM_introduction_3.0.htm</a></td>
<td></td>
</tr>
<tr>
<td>PRISM Compliance [PRISMCOMP]</td>
<td>Describes three profiles of PRISM compliance for content and systems; includes normative material.</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_compliance_3.0.pdf">http://www.prismstandard.org/specifications/3.0/PRISM_compliance_3.0.pdf</a></td>
<td>or</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_compliance_3.0.htm">http://www.prismstandard.org/specifications/3.0/PRISM_compliance_3.0.htm</a></td>
<td></td>
</tr>
</tbody>
</table>

3.2.2 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.

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PRISM Basic Metadata Specification [PRISMBMS]</td>
<td>Describes the basic metadata elements contained in the PRISM namespace to describe article content; includes normative material.</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_Basic_Metadata_3.0.pdf">http://www.prismstandard.org/specifications/3.0/PRISM_Basic_Metadata_3.0.pdf</a></td>
<td>or</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/PRISM_Basic_Metadata_3.0.htm">http://www.prismstandard.org/specifications/3.0/PRISM_Basic_Metadata_3.0.htm</a></td>
<td></td>
</tr>
<tr>
<td>PRISM Advertising Metadata Specification [PRISMADMS]</td>
<td>Describes advertising metadata elements including those drawn from AdsML, GWG and</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/3.0/">http://www.prismstandard.org/specifications/3.0/</a></td>
<td></td>
</tr>
</tbody>
</table>
## 3.2.3 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:

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PRISM PAM Markup Specification [PRISMPAMMS] <a href="http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.pdf">http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.pdf</a> or <a href="http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.htm">http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.htm</a></td>
<td>Describes the XML elements and attributes used to encode the PRISM Aggregator Message from both the pam: and pim: namespaces; includes normative material.</td>
</tr>
</tbody>
</table>

## 3.2.4 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:

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PRISM PAM Markup Specification [PRISMPAMMS] <a href="http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.pdf">http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.pdf</a> or <a href="http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.htm">http://www.prismstandard.org/specifications/2.1/PRISM_PAM_Markup_2.1.htm</a></td>
<td>Describes the XML elements and attributes used to encode the PRISM Aggregator Message from both the pam: and pim: namespaces; includes normative material.</td>
</tr>
</tbody>
</table>
3.2.5 PRISM Controlled Vocabulary Specifications

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

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PRISM Controlled Vocabulary Markup Specification [PRISMCVMS] <a href="http://www.prismstandard.org/specifications/3.0/PRISM_Controlled_Vocabulary_Markup_3.0.pdf">http://www.prismstandard.org/specifications/3.0/PRISM_Controlled_Vocabulary_Markup_3.0.pdf</a> or <a href="http://www.prismstandard.org/specifications/3.0/PRISM_Controlled_Vocabulary_Markup_3.0.htm">http://www.prismstandard.org/specifications/3.0/PRISM_Controlled_Vocabulary_Markup_3.0.htm</a></td>
<td>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]</td>
</tr>
</tbody>
</table>

3.2.6 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
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3.2.7 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.

3.2.8 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

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

3.2.9 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:

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.prismstandard.org/specifications/psv/1.0/PSV_over">http://www.prismstandard.org/specifications/psv/1.0/PSV_over</a></td>
<td></td>
</tr>
<tr>
<td>view.pdf or <a href="http://www.prismstandard.org/specifications/psv/1.0/PSV_over.htm">http://www.prismstandard.org/specifications/psv/1.0/PSV_over.htm</a></td>
<td></td>
</tr>
<tr>
<td>PRISM Source Vocabulary Specification [PSVS]</td>
<td>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.</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/psv/1.0/PSV.htm">http://www.prismstandard.org/specifications/psv/1.0/PSV.htm</a></td>
<td></td>
</tr>
<tr>
<td>or <a href="http://www.prismstandard.org/specifications/psv/1.0/PSV.pdf">http://www.prismstandard.org/specifications/psv/1.0/PSV.pdf</a></td>
<td></td>
</tr>
<tr>
<td>PRISM Source Vocabulary Markup Specification [PSVMS]</td>
<td>The PSV Markup Specification documents the XML tags in the PSV namespace that are used to encode XML Source Content.</td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/psv/1.0/PSV_mar">http://www.prismstandard.org/specifications/psv/1.0/PSV_mar</a></td>
<td></td>
</tr>
<tr>
<td>rkkup.pdf or <a href="http://www.prismstandard.org/specifications/psv/1.0/PSV_markup.htm">http://www.prismstandard.org/specifications/psv/1.0/PSV_markup.htm</a></td>
<td></td>
</tr>
<tr>
<td>Document</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PAM to PSV_Guide</td>
<td>This Guide documents mappings from PAM XML to PSV XML. It is normative only.</td>
</tr>
<tr>
<td>[PAMPSVGUIDE]</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.prismstandard.org/specifications/psv/1.0/PAM_PS">http://www.prismstandard.org/specifications/psv/1.0/PAM_PS</a> V.pdf</td>
<td></td>
</tr>
<tr>
<td>or <a href="http://www.prismstandard.org/specifications/psv/1.0/PAM_PS">http://www.prismstandard.org/specifications/psv/1.0/PAM_PS</a> V.htm</td>
<td></td>
</tr>
</tbody>
</table>

### 3.3 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.

### 3.4 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](http://www.nextpub.org)) and documented in the nextPub PSV Implementation Guide that will be published following the publication of this specification.
4 Specification Overview and Examples

This section provides a non-normative overview of the PRISM Specification and the types of problems that it addresses. It introduces the core concepts and many of the elements present in the PRISM Specification by starting with a basic document with Dublin Core metadata, then uses PRISM metadata elements to create richer descriptions of the article.

Although the PRISM Specification contains a large number of elements and controlled vocabulary terms, most of them are optional. A PRISM-compliant description can be very simple, or quite elaborate. It is not necessary to put forth a large amount of effort to apply metadata to every resource, although it is possible to apply very rich metadata to resources whose potential for reuse justifies such an investment. Similarly, PRISM implementations need not support every feature in the specification. Simple implementations will probably begin with the elements listed in Section 5, PRISM Namespaces and Elements and only add more capability as needed.

Note that PRISM provides three forms of compliance, PRISM Profile #3, PRISM Profile #2 and PRISM Profile #1. The primary difference is that profile two requires RDF-based structure as shown in virtually all the examples in this document. Profile #1 does not require the use of RDF. Profile #3 was added to provide the ability to embed PRISM metadata fields in resources using XMP.

4.1 Article Content

One of the most common uses of PRISM is to encode both the metadata of an article and the text of an article in XML using the PRISM Aggregator Message. Metadata may be specified both within the header and inline with the text. Note that in addition to encoding the metadata for the article, PAM also provides XML tagging for the article content, including associated media.

4.2 Travel Content Syndication Scenario

Wanderlust, a major travel publication, has a business relationship with travelmongo.com, a travel portal. After Wanderlust goes to press, they syndicate all of their articles and sidebars to content partners like travelmongo.com. Like many other publications, Wanderlust does not have the right to resell all of their images, because some of them have been obtained from stock photo agencies.

When Wanderlust creates syndication offers, an automated script searches through the metadata for the issue’s content to ensure that anything that cannot be syndicated is removed from the syndication offer with alternatives substituted when possible. Since Wanderlust tags its content with rights information in a standard way, this process happens automatically using off-the-shelf software.

Because Wanderlust includes standard descriptive information about people, products, places and rights when it syndicates its content, travelmongo.com can populate its content management system with all the appropriate data so that the articles can be properly classified and indexed. This reduces the cost to travelmongo.com of subscribing to third party content and makes content from Wanderlust even more valuable.
4.3 Basic Metadata

The elements in Dublin Core form the basis for PRISM’s metadata vocabulary. The simple PRISM metadata document shown in Figure 4.1 uses some Dublin Core and PRISM elements to describe an article. Note that this is not using the PAM XML tag set to tag article content, but is using an XML metadata container to hold PRISM metadata fields expressed as XML.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<prism:metadataContainer
     xml:lang="en-US"
     xmlns:dc="http://purl.org/dc/elements/1.1/"
     xmlns:prism="http://prismstandard.org/namespaces/basic/2.0/">
  <dc:identifier>100340926</dc:identifier>
  <prism:issueIdentifier>1000710</prism:issueIdentifier>
  <prism:originPlatform platform="print"/>
  <dc:title>The Real Running Mates</dc:title>
  <dc:creator>Karen Tumulty</dc:creator>
  <prism:publicationName>Time</prism:publicationName>
  <prism:coverDate>2007-09-24</prism:coverDate>
  <prism:coverDisplayDate>September 24, 2007</prism:coverDisplayDate>
  <prism:volume>170</prism:volume>
  <prism:number>13</prism:number>
  <dc:subject>POLITICS</dc:subject>
  <prism:person>Elizabeth Edwards</prism:person>
  <prism:person>Hillary Clinton</prism:person>
  <prism:genre>coverStory</prism:genre>
  <prism:wordCount>4188</prism:wordCount>
</prism:metadataContainer>
```

Example 4.1: Basic PRISM Description Profile 1, XML

PRISM descriptions are XML documents [W3C-XML], thus they begin with the standard XML declaration: `<?xml version="1.0"?>`. A character encoding may be given if needed. As indicated by the two attributes beginning with “xmlns:,” PRISM documents use the XML Namespace mechanism [W3C-XML-NS]. This allows elements and attributes from different namespaces to be combined. Namespaces are the primary extension mechanism in PRISM.

PRISM Profile #2 descriptions are compliant with the RDF constraints on the XML syntax. Thus, they begin with the rdf:RDF element. Because PRISM obeys the RDF constraints on XML structure, implementations are guaranteed to correctly parse even unknown elements and attributes. PRISM-compliant applications MUST NOT throw an error if they encounter unknown elements or attributes. They are free to delete or preserve such information, although recommended practice is to retain them and pass them along. Retaining the information is an architectural principle which helps new functionality be established in the presence of older versions of software. See Example 4.2.
PRISM recommends that the language of the metadata record, which is potentially different than the language of the resource it describes, be explicitly specified with the xml:lang attribute.

PRISM REQUIRES that resources have a unique identifier specified within the dc:identifier field. Other, more precise identifiers may also be specified. The dc:identifier may be any unique identifier including a DOI. In the above PRISM Profile #2 compliant example, the article is identified by a dc:identifier.

PRISM follows the case convention adopted in the RDF specification. All elements, attributes and attribute values typically begin with an initial lower case letter, and compound names have the first letter of subsequent words capitalized (camel case). Element types may begin with an uppercase letter when they denote Classes in the sense of the RDF Schema [W3C-RDFS]. Only one of the elements in any of the PRISM namespaces, pcv:Descriptor, does so. PRISM uses a simple naming convention. We avoid abbreviations, use American English spelling, and make the element names into singular nouns (or a pseudoNounPhrase, because of the case convention).

In PRISM Profile #2, property values that are URI references are given as the value of an rdf:resource attribute, as shown in the dc:identifier element of Example 4.1. Prose or non-URI values are given as element content, as seen in the dc:description element. This allows automated systems to easily determine when a property value is a URI reference.

### 4.4 Embedded vs. External Metadata

A common question is "Where do I put PRISM metadata?" There are three common places, depending on the application.

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 Example 4.1 and Example 4.2.
2. A description can be included in the content. PRISM metadata can be included as a header in an XML file or within the XMP envelope [XMP]. Example 4.1 shows a sample of a simple PAM XML file which contains an embedded PRISM description in the head and PRISM metadata inline within the content. See Example 4.3.

3. Descriptions of a number of files can be collected together in a ‘manifest’. See Example 4.4.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pam:message SYSTEM "pam-xhtml.dtd">
<pam:message>
  <pam:article xml:lang="en-US">
    <head>
      <dc:identifier>100340926</dc:identifier>
      <prism:issueIdentifier>1000710</prism:issueIdentifier>
      <pam:status>U</pam:status>
      <prism:originPlatform prism:platform="print"/>
      <dc:title>The Real Running Mates</dc:title>
      <dc:creator>Karen Tumulty</dc:creator>
      <dc:contributor prism:place="New York">With reporting by Nancy Gibbs</dc:contributor>
      <prism:publicationName>Time</prism:publicationName>
      <prism:issn>000000</prism:issn>
      <prism:coverDate>2007-09-24</prism:coverDate>
      <prism:coverDisplayDate>September 24, 2007</prism:coverDisplayDate>
      <prism:publicationDate prism:platform="web">2007-09-22</prism:publicationDate>
      <prism:volume>170</prism:volume>
      <prism:number>13</prism:number>
      <prism:startingPage>30</prism:startingPage>
      <prism:channel>Specials</prism:channel>
      <prism:section>The Well</prism:section>
      <prism:subsection1>Cover Story</prism:subsection1>
      <prism:subsection2>Nation</prism:subsection2>
      <prism:subsection3>Running Mates</prism:subsection3>
      <dc:subject>POLITICS</dc:subject>
      <dc:subject>CAMPAIGNS</dc:subject>
      <dc:subject>CHILDREN</dc:subject>
      <dc:subject>VOTERS</dc:subject>
      <dc:subject>FAMILY</dc:subject>
      <dc:subject>PRESS</dc:subject>
      <prism:person>Elizabeth Edwards</prism:person>
      <prism:person>Hillary Clinton</prism:person>
      <prism:person>Cindy McCain</prism:person>
      <prism:person>Laura Bush</prism:person>
      <prism:genre>coverStory</prism:genre>
      <prism:wordCount>4188</prism:wordCount>
    </head>
    <body>
    </body>
  </pam:article>
</pam:message>
```
Political spouses have traditionally wielded their influence in private. But in this race, all the rules will have to be rewritten.

Elizabeth Edwards prides herself on her ability to move the electorate.

Take what happened in 1992, when Bill Clinton and Al Gore campaigned on the road.

To read interviews with the running mates and see photos of the couples on the trail, visit time.com/spouses. Plus, Elizabeth Edwards and Ann Romney speak about campaigning while battling breast cancer and MS.

If you’re not moving votes or moving voters, then you’re not using your time very wisely. --ELIZABETH EDWARDS

Example 4.3: Embedding a Description inside the Resource it describes Profile #1, XML

```xml
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xml:lang="en-US">
  <rdf:Description rdf:about="Gettysburg.xml">
    <dc:description>Start of the Gettysburg Address</dc:description>
    <dc:creator>Abraham Lincoln</dc:creator>
    <dc:format>text/xml</dc:format>
    <prism:distributor>LexisNexis</prism:distributor>
  </rdf:Description>
  <rdf:Description rdf:about="Corfu.jpg">
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Peterson</dc:creator>
    <dc:format>image/jpeg</dc:format>
    <prism:distributor>Time Inc.</prism:distributor>
  </rdf:Description>
  <rdf:Description rdf:about="Welch-bio.html">
    <dc:title>GE's Genius</dc:title>
    <dc:subject>Jack Welch</dc:subject>
    <dc:creator>Jane Doe</dc:creator>
    <dc:format>text/html</dc:format>
  </rdf:Description>
</rdf:RDF>
```

Example 4.4: Describing Multiple Resources in a Manifest, Profile #2, XML/RDF
4.4.1 A Brief Digression on Intent

Example 4.2 illustrates another important point. Note that the name given in the dc:creator element is “Abraham Lincoln,” not the name of the person who actually created the XML file and entered Lincoln’s famous line into it. There are applications, such as workflow, quality assurance, and historical analysis, where it would be important to track the identity of that individual. However, none of those are problems PRISM attempts to solve. PRISM’s purpose is to describe information for exchange and reuse between different systems, but not to say anything about the internal operations of those systems. The PRISM Working Group decided that workflow was an internal matter. This focus on a particular problem allows PRISM descriptions to avoid some thorny issues that more general specifications must address.

4.5 Controlled Vocabularies

Property values in PRISM may be strings, as shown in Example 4.5, or may be terms from a controlled vocabulary. Controlled vocabularies are an important extensibility mechanism. They also enable significantly more sophisticated applications of the metadata. As an example, consider the two descriptions below. The first provides a basic, human-readable, value for the dc:creator element, telling us that the Corfu photograph was taken by John Peterson. The second description appears harder to read, because it does not give us John Peterson’s name. Instead, it makes reference to John Peterson’s entry in the employee database for Wanderlust.

```
<rdf:Description rdf:about="http://wanderlust.com/2000/08/Corfu.jpg">
  <dc:creator>John Peterson</dc:creator>
  ...
</rdf:Description>

<rdf:Description rdf:about="http://wanderlust.com/2000/08/Corfu.jpg">
  ...
</rdf:Description>
```

Example 4.5: Use of a String Value vs. Controlled Vocabulary Reference, Profile #2, XML/RDF

That employee database is an example of a controlled vocabulary – it keeps a list of terms (employee names). It has a defined and controlled update procedure (only authorized members of the HR department can update the employee database, and all changes are logged). It uses a unique identification scheme (employee numbers) to handle the cases where the terms are not unique (Wanderlust might have more than one employee with a name like “John Peterson”). It can associate additional information with each entry (salary, division, job title, etc.)

The unique identifier is one of the keys to the power behind the use of controlled vocabularies. If we are given metadata like the first example, we are limited in the types of displays we can generate. We can list Wanderlust’s photographs, sorted by title or by author name. By using the employee database, we can generate those, but also lists organized by department, job title, salary, etc. We also avoid problems around searching for common names like “John Smith,” dealing with name changes such as those due to marriage and divorce, and searching for items that have been described in other languages. Finally, content items are easier to reuse if they have been coded with widely adopted controlled vocabularies, which increases their resale value.

Defining additional vocabularies for specialized uses is a way to extend descriptive power without resorting to prose explanations. This makes them far more suited to automatic processing.

PRISM specifies controlled vocabularies of values for some elements such as prism:genre. Others elements will use controlled vocabularies created and maintained by third parties, such as the International Standards Organization (ISO). For example, PRISM recommends the use of ISO 3166 (Codes for Countries) for specifying the value of
elements like prism:location. Other third-party controlled vocabularies, such as the Getty Thesaurus of Geographic Names [TGN] may be used. Site-specific controlled vocabularies, such as from employee or customer databases, may also be used at the risk of limiting interoperability.

In Example 4.6 Identifier rdf:resource="http://wanderlust/content/2357845"/

```xml
...  
</rdf:Description>
```

Example 4.6: Referring to Locations with Controlled Vocabularies, Profile #2, XML/RDF

### 4.5.1 Definition of Controlled Vocabularies

PRISM provides a small namespace of XML elements so that new controlled vocabularies can be defined. For example, Wanderlust might have prepared an exportable version of its employee database that contained entries like:

```xml
...  
<pcv:Descriptor rdf:ID="http://wanderlust.com/emp3845">
  <pcv:code>3845</pcv:code>
  <pcv:label>John Peterson</pcv:label>
  <hr:hireDate>1995-2-22</hr:hireDate>
  <hr:division>Photography</hr:division>
  <hr:manager rdf:resource="emp2234"/>
</pcv:Descriptor>
<pcv:Descriptor rdf:ID="http://wanderlust.com/emp4541">
  <pcv:code>4541</pcv:code>
  <pcv:label>Sally Smith</pcv:label>
  <hr:hireDate>1999-12-02</hr:hireDate>
  <hr:division>Photography</hr:division>
  <hr:manager rdf:resource="emp3845"/>
</pcv:Descriptor>
```

Example 4.6: Providing Custom Controlled Vocabularies

These entries use elements from the Prism Controlled Vocabulary (PCV) namespace for information important to the controlled vocabulary nature of the entries – the employee name and the employee ID. The PCV namespace also includes other elements so it can represent basic hierarchical taxonomies. The PCV namespace is not intended to be a complete namespace for the development, representation, and maintenance of taxonomies and other forms of controlled vocabularies. Other vocabularies, such as XTM or VocML, may be used for such purposes. As long as URI references can be used to refer to the terms defined in these other markup languages, there is no problem is using them in PRISM descriptions.

The sample descriptions in Example 4.5 also mix in elements from a hypothetical Human Resources (hr) namespace. Providing that information enables useful functions, such as sorting the results by division or by manager, etc. The hr namespace is only an example, provided to show how elements from other namespaces may be mixed into PRISM descriptions.

### 4.5.2 Internal Description of Controlled Vocabularies

Linking to externally-defined controlled vocabularies is a very useful capability, as indicated by the range of additional views described in the earlier example. However, external vocabularies do require lookups in order to
fetch that information, which may make common operations too slow. PRISM also allows portions of a vocabulary entry to be provided within a description that uses them, similar to a caching mechanism. For example, the PRISM description of the Corfu photo can be made more readable, while still allowing all the power that comes from controlled vocabularies, by providing some of the information inline. See Example 4.7.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:prism="http://prismstandard.org/namespaces/basic/2.0/"
    xmlns:dc="http://purl.org/dc/elements/1.1/"
    xml:base="http://wanderlust.com/">
    <rdf:Description rdf:about="/2000/08/Corfu.jpg">
        <dc:identifier rdf:resource="/content/2357845"/>
        <dc:creator>
            <pcv:Descriptor rdf:about="/emp3845">
                <pcv:label>John Peterson</pcv:label>
            </pcv:Descriptor>
        </dc:creator>
        <prism:location>
                <pcv:label xml:lang="en">Greece</pcv:label>
                <pcv:label xml:lang="fr">Grèce</pcv:label>
            </pcv:Descriptor>
        </prism:location>
    </rdf:Description>
</rdf:RDF>
```

Example 4.7 Providing Human-Readable Controlled Vocabulary References, Profile #2, XML/RDF

This approach uses the pcv:Descriptor element, which is a subclass of rdf:Descriptor, indicating that the resource is a taxon in a controlled vocabulary. Notice it also uses the rdf:about attribute, instead of the rdf:ID attribute, which means that we are describing the taxon, not defining it. The actual definitions of those terms are maintained elsewhere. The XML tag set for defining a controlled vocabulary is defined in the PRISM Controlled Vocabulary Markup Specification [PRISMCVMS].

### 4.5.3 PRISM-defined Controlled Vocabularies

The PRISM Specification defines a set of vocabularies for use in characterizing resources. These vocabularies are defined in PRISM Controlled Vocabularies Specification [PRISMCVS].

### 4.6 Relations

It is often necessary to describe how a number of resources are related. For example, an image can be part of a magazine article. PRISM defines a number of elements to express relations between resources, so describing that this image is part of a magazine article can be coded as illustrated in Example 4.8.

```xml
<rdf:Description rdf:about="http://wanderlust.com/2000/08/Corfu.jpg">
    <dc:identifier rdf:resource="http://wanderlust.com/content/2357845"/>
    ...
    <dcterms:isRequiredBy rdf:resource="http://wanderlust.com/2000/08/CorfuArticle.xml"/>
</rdf:Description>
```

Example 4.8: Contained-In Relationship, Profile #2, XML/RDF
PRISM Introduction Version 3.0

It is possible, but not mandatory, to add a statement to the description of the Corfu article saying that it contained the image. See Example 4.9.

```
<rdf:Description rdf:about="http://wanderlust.com/2000/08/CorfuArticle.xml">
  ...
</rdf:Description>
```

Example 4.9: Containing Relationship, Profile #2, XML/RDF

### 4.7 Metadata Describing Content Resources

Many different kinds of information are frequently lumped together as information about the “type” of a resource. The PRISM Specification breaks out into a number of different components in order to allow for more precise searches. Controlled vocabularies are provided for each to make its use easy to understand and the values immediately accessible.

#### 4.7.1 Resource Format

File formats are indicated through the use of Internet Media Types (aka MIME types [RFC-2046]) in the dc:format element. An example is `<dc:format>application/pdf</dc:format>.

#### 4.7.2 Content Type

In the early days of PRISM, it could be assumed the unit was an article of a magazine, journal or other serial publication. Now, expanding the scope to cover the broader publishing use cases for nextPub, the unit of content is not so obvious. This is particularly true when advertising material or book content is added to the scope.

In order to refine what we mean by the generic term “article,” the PRISM Content Type Controlled Vocabulary has been developed. Some content types that describe the nextPub unit of storage include an advertisement, article, blog entry, book chapter, front cover, masthead, and even navigation aids.

See the PRISM Controlled Vocabulary Markup Specification [PRISMCVMS] for complete documentation of the new PRISM Content Type Controlled Vocabulary.

#### 4.7.3 Genre

In addition, the PRISM Genre Controlled Vocabulary has been enhanced to refine the intellectual description of core content units. So if a unit of stored content is type “article” we can refine the description by specifying that the genre is a cover story that is an interview, a profile or even a photo essay.

See the PRISM Controlled Vocabulary Markup Specification [PRISMCVMS] for complete documentation of the PRISM Genre Controlled Vocabulary.

#### 4.7.4 Aggregation Type

Sometimes PRISM metadata is used to describe a collection of content that is delivered to a distributor or to a platform for display. The PRISM Aggregation Type Controlled Vocabulary has been added in PRISM 3.0 to define the aggregation or delivery unit of a resource, and is used to provide values for prism:aggregationType metadata field.
See the PRISM Controlled Vocabulary Markup Specification [PRISMCVMS] for complete documentation of the PRISM Aggregation Type Controlled Vocabulary.

4.7.5 Delivery Platform / Device

In today’s environment, a single resource may be delivered across multiple platforms. The content, the format and even the layout may differ based on the platform. The PRISM Platform Controlled Vocabulary begins to address the differences in such platforms as:

- broadcast
- email
- eReader
- mobile
- other
- print
- recordableMedia
- smartPhone
- tablet
- web

In earlier versions of PRISM, defining the platform was sufficient. However, today, even the device type for the tablet or smart phone platform require further customization. So PRISM 3.0 now includes a new prism:device field (no controlled vocabulary) to refine the prism:platform.

Table 4.1 shows how metadata from each PRISM controlled vocabulary may be applied to a single resource. It is the intersection of these values that provide the precise description of the resource.
Rights and Permissions

Licensing content for reuse is a major source of revenue for many publishers. Conforming to licensing agreements is a major cost – not only to the licensee of the content but also to the licensor. For these reasons, PRISM has released a new namespace in PRISM 2.1, PRISM Usage Rights, for the purpose of describing the rights and permissions granted to the receiver of content. PRISM assumes that the sender and receiver of content are engaged in a business relationship. It may be a formal contract or an informal provision of freely redistributable content. One of the parties may not know the other. The working group explicitly rejected imposing any requirements on enforcing trusted commerce between unknown parties. Instead the PRISM Usage Rights Namespace concentrates on digital rights description and tracking, which can enable rights management and lower the associated costs.

Rights elements originally defined within the prism: namespace are duplicated within the new Usage Rights namespace along with new elements to provide for more robust usage rights description metadata, often based on a publisher’s unique distribution channels. Usage rights elements from the prism: namespace will be deprecated when PRISM 3.0 is published. In addition, the PRISM Rights Language (PRL) namespace will also be deprecated. Best practice is to begin the transition from existing PRISM rights elements to the new elements within the pur: namespace as soon as possible.

Example 4.8 provides an example of the new PRISM usage rights expression within a pam:media element.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<pam:message xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://prismstandard.org/pam/3.0 pam.xsd"
xmns:pam="http://prismstandard.org/namespaces/pam/3.0/"
xmns:xhtml="http://www.w3.org/1999/xhtml"
xmns:prism="http://prismstandard.org/namespaces/basic/3.0/"
xmns:pim="http://prismstandard.org/namespaces/pim/3.0/"
xmns:dcterms="http://purl.org/dc/terms/"
xmns:prl="http://prismstandard.org/namespaces/prl/3.0/"
xmns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmns:pur="http://prismstandard.org/namespaces/prismusagerights/3.1/"
xmns:dc="http://purl.org/dc/elements/1.1/"
xmns="http://www.w3.org/1999/xhtml">
<pam:article>
  <head> . . . </head>
  <body> . . .
  <pam:media>
```
Example 4.8 PRISM Usage Rights, Profile 1

4.8.1 No Rights Information

In Example 4.9 no rights information is provided for the Corfu photograph. Does the lack of explicit restrictions mean the sender gives the receiver permission to do everything with the image? Or does the lack of explicitly granted rights imply that they can do nothing? Neither. Instead, we rely on the assumption of an existing business relation. In the absence of specific information, parties in a PRISM transaction assume that the normal rules of their specific business relation apply.

Example 4.9: No Explicit Rights, Profile #2, XML/RDF

4.8.2 Relationship Information

PRISM rights metadata is specific to the relationship between a sender and a receiver.
Example 4.10 Citing a Specific Agreement, Profile #2, XML/RDF

Example 4.10 specifically identifies the terms and conditions for reusing the image. That can make the process of manually tracking down rights and permissions a little easier since the contract number is known. It also lets software be written to enforce the terms of particular contracts.

The prospect of implementing software to enforce the terms of each contract is not enticing. So, PRISM provides some simple mechanisms to accommodate common cases without specialized software. One common case is when a publisher provides a large amount of material, such as the layouts for an entire magazine issue, to a partner publisher who will republish parts of it. Much of the content in the issue will be the property of the sending publisher, and covered under their business agreement with the receiving publisher. However, the issue will also contain stock photos and other materials that are not covered by the agreement. The example below shows how the controlled value #notReusable indicates to the receiver, travelmongo.com, that this item is not covered under their agreement with the sender, Wanderlust. This is, in fact, a benefit to Wanderlust. Travelmongo.com will not ask Wanderlust staff to search for contract terms on images Wanderlust does not own – a considerable cost savings. The rightsAgency element is provided so that the receiver of a contact item has someone to contact should they wish to obtain the rights to use the non-Wanderlust content.

The description below also shows how the descriptions for multiple objects can be packaged into a single PRISM file shown in Example 4.11.

Example 4.11: Describing Multiple Items in a Single PRISM File, Profile #2, XML/RDF
PRISM Introduction Version 3.0

5 THE PRISM NAMESPACES AND ELEMENTS

PRISM is intended to be a modular specification; it is more likely that applications will use portions of PRISM than its entirety. The PRISM elements are separated into a series of functional namespaces, each covered in a separate normative specification. This section describes each briefly and provides a reference to the module specifications. For formal references to the namespaces, see PRISM Compliance [PRISMCOMP].

5.1 Recommended PRISM Metadata Namespaces

The following are the recommended Namespaces for PRISM metadata:

<table>
<thead>
<tr>
<th>Namespace</th>
<th>Recommended Namespace Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin Core</td>
<td>xmlns:dc=&quot;<a href="http://purl.org/dc/elements/1.1/">http://purl.org/dc/elements/1.1/</a>&quot;</td>
</tr>
<tr>
<td>DC Terms</td>
<td>xmlns:dcterms=&quot;<a href="http://purl.org/dc/terms/">http://purl.org/dc/terms/</a>&quot;</td>
</tr>
<tr>
<td>PRISM</td>
<td>xmlns:prism=&quot;<a href="http://prismstandard.org/namespaces/basic/3.0/">http://prismstandard.org/namespaces/basic/3.0/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Usage Rights</td>
<td>xmlns:pur=&quot;<a href="http://prismstandard.org/namespaces/pur/3.0/">http://prismstandard.org/namespaces/pur/3.0/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Advertising</td>
<td>xmlns:prism-ad=&quot;<a href="http://prismstandard.org/namespaces/prism-ad/3.0/">http://prismstandard.org/namespaces/prism-ad/3.0/</a>&quot;</td>
</tr>
<tr>
<td>GWG Ad Ticket</td>
<td>xmlns:gwg-at=&quot;<a href="http://gwg.org/xmlns">http://gwg.org/xmlns</a>&quot;</td>
</tr>
<tr>
<td>AdsML Ad Ticket</td>
<td>xmlns:adsml-at=&quot;<a href="http://adsml.org/xmlns">http://adsml.org/xmlns</a>&quot;</td>
</tr>
<tr>
<td>PRISM Metadata for Images</td>
<td>xmlns:prism=&quot;<a href="http://prismstandard.org/namespaces/PMI/3.0/">http://prismstandard.org/namespaces/PMI/3.0/</a>&quot;</td>
</tr>
<tr>
<td>Adobe Photoshop Metadata</td>
<td>xmlns:photoshop=&quot;<a href="http://ns.adobe.com/photoshop/1.0/">http://ns.adobe.com/photoshop/1.0/</a>&quot;</td>
</tr>
<tr>
<td>IPTC Metadata</td>
<td>xmlns:iptc4xmpExt=&quot;<a href="http://iptc.org/std/iptc4xmpext/2008-02-29/">http://iptc.org/std/iptc4xmpext/2008-02-29/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Recipe Metadata</td>
<td>xmlns:prism=&quot;<a href="http://prismstandard.org/namespaces/prm/3.0/">http://prismstandard.org/namespaces/prm/3.0/</a>&quot;</td>
</tr>
</tbody>
</table>

Table 5.1: PRISM Metadata Namespaces

5.2 Recommended PRISM XML Tag Set Namespaces

The following are the recommended Namespaces for PRISM metadata:

<table>
<thead>
<tr>
<th>Namespace</th>
<th>Recommended Namespace Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRISM Controlled Vocabulary Markup</td>
<td>xmlns:pcv=&quot;<a href="http://prismstandard.org/namespaces/pcv/3.0/">http://prismstandard.org/namespaces/pcv/3.0/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Source Vocabulary</td>
<td>xmlns:psv=&quot;<a href="http://prismstandard.org/namespaces/psv/1.0/">http://prismstandard.org/namespaces/psv/1.0/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Inline Markup</td>
<td>xmlns:pim=&quot;<a href="http://prismstandard.org/namespaces/pim/3.0/">http://prismstandard.org/namespaces/pim/3.0/</a>&quot;</td>
</tr>
<tr>
<td>PRISM Source Vocabulary (PSV) Markup</td>
<td>xmlns:nextPub=&quot;<a href="http://nextpub.org/namespaces/psv/1.0/">http://nextpub.org/namespaces/psv/1.0/</a>&quot;</td>
</tr>
<tr>
<td>RDF</td>
<td>xmlns:rdf=&quot;<a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#">http://www.w3.org/1999/02/22-rdf-syntax-ns#</a>&quot;</td>
</tr>
<tr>
<td>XHTML/HTML5</td>
<td>xmlns:xhtml=&quot;<a href="http://www.w3.org/1999/xhtml">http://www.w3.org/1999/xhtml</a>&quot;</td>
</tr>
</tbody>
</table>

Table 5.2: Recommended PRISM Markup Namespaces

5.3 Alphabetical Listing of PRISM Metadata Fields

The following is an alphabetical list of PRISM metadata fields. Following the field name is the namespace and the document in the PRISM documentation package where that element appears. Note that only metadata fields are included in this list. Elements developed for a specific use case such as PAM, are not metadata elements and are not included in this list! PAM markup elements are documented in The PRISM PAM Markup Specification [PRISMPAMMS]. PRISM Inline Markup elements are documented in The PRISM Inline Markup Specification [PRISMIMS]. And markup elements to define a controlled vocabulary are documented in The PRISM Controlled Vocabulary Markup Specification [PRISMCVMS].
• academicField (prism:, pim:)
• adDescription (adsml-at:)
• AdvertisedProduct (adsml-at:)
• AdvertiserName (adsml-at:)
• adultContentWarning (pur:)
• aggregateIssueNumber (prism:)
• aggregationType (prism:)
• agreement (pur:)
• alternateTitle (prism:)
• audienceType (prism-ad:)
• blogID (prism:)
• blogTitle (prism:)
• blogURL (prism:)
• adsml-at:BuyerName
• byteCount (prism:)
• Change (adsml-at:)
• Color (adsml-at:)
• ColorDescription (adsml-at:)
• City (Iptc4xmpExt:)
• color (pmi:)
• complianceProfile (prism:)
• contactInfo (pmi:)
• contentType (prism:)
• contributor (dc:)
• cookingEquipment (prm:)
• cookingMethod (prm:)
• copyright (pur:)
• copyrightYear (prism:)
• corporateEntity (prism:)
• CountryCode (Iptc4xmpExt:)
• CountryName (Iptc4xmpExt:)
• course (prm:)
• coverDate (prism:)
• coverDisplayDate (prism:)
• creationDate (prism:)
• creator (dc:)
• CreatorName (adsml-at:)
• Credit (photoshop:)
• creditLine (pur:)
• cuisine (prm:)
• DateCreated (photoshop:)
• dateReceived (prism:)
• description (dc:)
• device (prism:)
• dietaryNeeds (prm:)
• dishType (prm:)
• displayName (pmi:)
• distributor (prism:)
• distributorProductID (pmi:)
• doi (prism:)
• duration (prm:)
• edition (prism:)
• eIssn (prism:)
• embargoDate (pur:)
• endingPage (prism:)
• event (prism:, pim:)
• eventAlias (pmi:)
• eventEnd (pmi:)
• eventStart (pmi:)
• eventSubtype (pmi:)
• eventType (pmi:)
• exclusivityEndDate (pur:)
• expirationDate (pur:)
• FirstPublication (adsml-at:)
• format (dc:)
• framing (pmi:)
• genre (prism:)
• hasAlternative (prism:)
• hasCorrection (prism:)
• hasFormat (dcterms:)
• hasPart (dcterms:)
• hasPreviousVersion (prism:)
• hasVersion (dc:)
• hasTranslation (prism:)
• Headline (photoshop:)
• identifier (dc:)
• IDType (prism-ad:)
• imageSizeRestriction (pur:)
• industry (prism:)
• ingredientExclusion (prm:)
• Instructions (photoshop:)
• isbn (prism:)
• isCorrectionOf (prism:)
• isFormatOf (dcterms:)
• isPartOf (dcterms:)
• isRequiredBy (dcterms:)
• issn (prism:)

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- issueIdentifier (prism:)
- issueName (prism:)
- issueTeaser (prism:)
- issueType (prism:)
- isTranslationOf (prism:)
- isVersionOf (dcterms:)
- keyword (prism:)
- killDate (prism:)
- language (dc:)
- link (prism:, pim:)
- location (pmi:)
- LocationCreated (Iptc4xmpExt:)
- LocationShown (Iptc4xmpExt:)
- mainIngredient (prm:)
- make (pmi:)
- manufacturer (pmi:)
- meal (prm:)
- metadataContainer (prism:)
- model (pmi:)
- modelYear (pmi:)
- modificationDate (prism:)
- nationalCatalogNumber (prism:)
- number (prism:)
- object (prism:, pim:)
- objectDescription (pmi:)
- objectSubtype (pmi:)
- offSaleDate (pmi:)
- onSaleDate (pmi:)
- onSaleDay (prism©)
- optionEndDate (pur:)
- organization (prism:)
- originPlatform (prism:)
- orientation (pmi:)
- pageCount (prism:)
- pageProgressionDirection (prism:)
- pageRange (prism:)
- PartVersion (gwg-at:)
- permissions (pur:)
- person (prism:, pim:)
- positionDescriptor (pmi:)
- PrimaryMaterialsID (adsm:at:)
- PrintFixedArea (adsm:at:)
- PrintHeightUnit (adsm:at:)
- PrintHeightValue (adsm:at:)
- PrintWidthUnit (adsm:at:)
- printWidthValue (adsm:at:)
- productID (pmi:)
- productIDType (pmi:)
- ProductionContact (adsm:at:)
- ProductionEmail (adsm:at:)
- ProductionName (adsm:at:)
- ProductionTelephone (adsm:at:)
- profession (prism:, pim:)
- ProvinceState (Iptc4xmpExt:)
- Publication (adsm:at:)
- publicationDate (prism:)
- publicationDisplayDate (prism:)
- publicationName (prism:)
- publisher (dc)
- Publisher: (adsm:at:)
- publisherMaterialsID (prism-ad:)
- publishingFrequency (prism:)
- recipeEndingPage (prm:)
- recipePageRange (prm:)
- recipeSource (prm:)
- recipeStartingPage (prm:)
- recipeTitle (prm:)
- relation (dc:)
- Remarks (adsm:at:)
- requires (dc:)
- restrictions (pur:)
- reuseProhibited (pur:)
- rights (dc:)
- rightsAgent (pur:)
- rightsOwner (pur:)
- samplePageRange (prism:)
- season (pmi:)
- section (prism:)
- Section (adsm:at:)
- SellerPlacementID (adsm:at:)
- sellerSalesRep (gwg-at:)
- sellingAgency (prism:)
- sequenceName (pmi:)
- sequenceNumber (pmi:)
- sequenceTotalNumber (pmi:)
- seriesNumber (prism:)
- seriesTitle (prism:)
- setting (pmi:)
- slideshowName (pmi:)
- slideshowNumber (pmi:)

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- slideshowTotalNumber (pmi:)
- servingSize (prm:)
- skillLevel (prm:)
- source (dc:)
- source (dcterms:)
- Source (photoshop:)
- specialOccasion (prm:)
- sport (prism:, pim:)
- startingPage (prism:)
- subchannel1 (prism:)
- subchannel2 (prism:)
- subchannel3 (prism:)
- subchannel4 (prism:)
- subject (dc:)
- Sublocation (Iptc4xmpExt:)
- subsection1 (prism:)
- subsection2 (prism:)
- subsection3 (prism:)
- subsection4 (prism:)
- subtitle (prism:)
- supplementDisplayID (prism:)

- supplementStartingPage (prism:)
- supplementTitle (prism:)
- tabletAdType (prism-ad:)
- targetedAudience (prism-ad)
- teaser (prism:)
- ticker (prism:, pim:)
- timePeriod (prism:, pim:)
- title (dc:)
- TransmissionReference(photoshop:)
- type (dc:)
- url (prism:)
- uspsNumber (prism:)
- versionIdentifier (prism:)
- viewpoint (pmi:)
- visualTechnique (pmi:)
- volume (prism:)
- webTarget (prism-ad:)
- wordCount (prism:)
- yield (prm:)

5.4 The PRISM Subset of the Dublin Core Metadata Fields

PRISM includes a subset of Dublin Core elements for certain basic metadata. The normative definitions of the Dublin Core elements can be found in [DCMI]. The specific elements used in PRISM are listed in [PRISMDCMS]. The use of some DC elements is encouraged, others are discouraged, and others constrained.

Elements in the PRISM Subset of the Dublin Core include:

- dc:contributor
- dc:creator
- dc:description
- dc:format
- dcterms:hasFormat
- dcterms:hasPart
- dcterms:hasVersion
- dc:identifier
- dcterms:isPartOf
- dcterms:isRequiredBy
- dcterms:isVersionOf
- dc:language
- dc:publisher
- dc:relation
- dcterms:requires
- dc:rights
- dc:source
- dcterms:source
5.5 The PRISM Basic Metadata Fields

PRISM extends its metadata element set beyond those selected from Dublin Core in order to specifically allow for fuller description of magazine and journalist content. The “prism:” namespace contains elements suitable for a wide range of content publication, licensing, and reuse situations. They are described in [PRISMPRISMNS].

Elements in the PRISM Namespace (prism:) include:

- academicField
- aggregationType
- alternateTitle
- byteCount
- channel
- complianceProfile
- contentType
- corporateEntity
- coverDate
- coverDisplayDate
- creationDate
- dateReceived
- device
- distributor
- doi
- edition
- eIssn
- endingPage
- event
- genre
- hasAlternative
- hasCorrection
- hasPreviousVersion
- hasTranslation
- industry
- isbn
- isCorrectionOf
- issn
- issueFrequency
- issueIdentifier
- issueName
- issueTeaser
- isTranslationOf
- keyword
- killDate
- link
- modificationDate
- number
- object
- offSaleDate
- organization
- originPlatform
- pageCount
- pageProgressionDirection
- pageRange
- person
- platform
- profession
- publicationDate
- publicationName
- rating
- section
- sellingAgent
- startingPage
- subchannel1
- subchannel2
- subchannel3
- subchannel4
- subsection1
- subsection2
- subsection3
- subsection4
- supplementDisplayID
- supplementStartingPage
- supplementTitle
- teaser
- ticker
- timePeriod
- url
- versionIdentifier
5.6 The PRISM Advertising Metadata Fields
Elements in the PRISM Advertising Metadata Namespace (prism-ad:) include:

- advertisedBrand
- audienceType
- adIDSystem
- adPosition
- publisherMaterialsID
- sellerSalesRepContact
- sellerSalesRepEmail
- tabletAdType
- targetedAudience
- webTarget

5.7 The PRISM Image Metadata Fields
Elements in the PRISM Metadata for Images Namespace (pmi:) include:

- byteCount
- color
- contactInfo
- displayName
- distributorProductID
- eventAliis
- eventEnd
- eventStart
- eventSubtype
- eventType
- framing
- location
- make
- manufacturer
- model
- modelYear
- objectDescription
- objectSubtype
- orientation
- positionDescriptor
- productID
- productIDType
- season
- sequenceName
- sequenceNumber
- sequenceTotalNumber
- setting
- slideshowName
- slideshowNumber
- slideshowTotalNumber
- viewpoint
- visualTechnique

5.8 The PRISM Recipe Metadata Fields
Elements in the PRISM Recipe Metadata Namespace include:

- cookingEquipment
- cookingMethod
- course
- cuisine
- dietaryNeeds
- dishType
- duration
- ingredientExclusion
- mainIngredient
- meal
- recipeEndingPage
- recipePageRange
5.9 The PRISM Usage Rights Namespace

As of the PRISM V2.1 Specification, the PRISM Usage Rights Namespace is a new addition. This namespace incorporates some elements from the prism: namespace as well as new rights elements. It is the intent that both the PRISM Rights Language (prl:) namespace and rights elements from the PRISM namespace will be deprecated when the next major revision of PRISM (V3.0) is published.

Elements in the PRISM Rights Language Namespace (pur:) include:

- adultContentWarning
- agreement
- copyright
- creditLine
- embargoDate
- exclusivityEndDate
- expirationDate
- imageSizeRestriction
- optionEndDate
- permissions
- restrictions
- reuseProhibited
- rightsAgent
- rightsOwner
6 PRISM Controlled Vocabularies

In addition to defining metadata fields to support management, aggregation, delivery and reuse of publishing content and rich media, PRISM has also defined a number of values with precise definitions, or controlled vocabularies, for these metadata fields. URLs for each CV can be found in the PRISM Controlled Vocabularies Specification [PRISMCVS].

<table>
<thead>
<tr>
<th>Vocabulary Name</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRISM Aggregation Type</td>
<td>The PRISM Aggregation Type CV provides values for prism:aggregationType. This vocabulary specifies the unit of delivery for content, not only to aggregators but to distributors and devices.</td>
</tr>
<tr>
<td>PRISM Compliance Profile</td>
<td>The prism:complianceProfile provides values to identify the compliance of a metadata instance.</td>
</tr>
<tr>
<td>PRISM Content Type</td>
<td>The PRISM Content Type CV defines the type of nextPub content building block and is used with the prism:contentType field. This element can be refined by PRISM Genre</td>
</tr>
<tr>
<td>PRISM Genre</td>
<td>The PRISM Genre CV provides values to identify the intellectual content of a resource and is used with the prism:genre element.</td>
</tr>
<tr>
<td>PRISM Issue Frequency</td>
<td>The PRISM Issue Frequency CV provides values for the prism:issueFrequency metadata field.</td>
</tr>
<tr>
<td>PRISM Issue Type</td>
<td>The PRISM Issue Type CV provides values for prism:issueType element.</td>
</tr>
<tr>
<td>PRISM Platform</td>
<td>The PRISM Platform CV provides values to identify the delivery platform of a resource. PRISM Platform is more generic than dc:medium in that it is used to specify the medium of the physical carrier of a resource in a much more precise way. The controlled vocabulary provides values for platform= attribute on elements that may vary depending on the delivery platform.</td>
</tr>
<tr>
<td>PRISM Presentation Type</td>
<td>The PRISM Presentation Type CV provides values for dc:type that specify presentation type for the resource. For nextPub implementations, this controlled vocabulary provides class= attribute values for the HTML5 &lt;figure element to express the presentation type of the figure.</td>
</tr>
<tr>
<td>PRISM Role</td>
<td>The PRISM Role CV provides values for the prism:role attribute for dc:creator and dc:contributor. While the role= attribute is optional, it provides a mechanism to provide more granular role metadata for a creator or contributor.</td>
</tr>
<tr>
<td>PAM Class</td>
<td>The PAM Class CV provides values for elements in the PAM message that use the class= attribute to provide more precise description of elements or groups of elements. While the class attribute can be used with almost any XHTML element, it is most commonly used with p and div.</td>
</tr>
<tr>
<td>PRISM Content Class</td>
<td>The PRISM Content Class CV provides values for elements in the HTML5 body of an article or other content that use the class= attribute to provide more precise description. While the class attribute can be used with almost any HTML5 element, it is most commonly used with &lt;p and &lt;.</td>
</tr>
<tr>
<td>PRISM Inline Class</td>
<td>The PRISM Inline Class controlled vocabulary provides values for the markup of inline content in the HTML5 body of an article. These values should be used for the class attribute should be used exclusively with the &lt;span element.</td>
</tr>
<tr>
<td>PSV Figure Class</td>
<td>The Figure Content Class Vocabulary describes classes of PSV content markup inside a figure. The terms included in this CV map directly to PAM content elements.</td>
</tr>
</tbody>
</table>
### Recipe Controlled Vocabularies

<table>
<thead>
<tr>
<th>PRM Cooking Equipment</th>
<th>The PRISM Cooking Equipment CV provides values for the prm:cookingEquipment metadata field.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRM Cooking Method</td>
<td>The PRISM Cooking Method CV provides values for the prm:cookingMethod metadata field.</td>
</tr>
<tr>
<td>PRM Course</td>
<td>The PRISM Course CV provides values for the prm:course metadata field.</td>
</tr>
<tr>
<td>PRM Cuisine</td>
<td>The PRISM Cuisine CV provides values for the prm:cuisine metadata field.</td>
</tr>
<tr>
<td>PRM Dietary Needs</td>
<td>The PRISM Dietary Needs CV provides values for the prm:dietaryNeeds metadata field.</td>
</tr>
<tr>
<td>PRM Dish Type</td>
<td>The PRISM Dish Type CV provides values for the prm:dishType metadata field.</td>
</tr>
<tr>
<td>PRM Ingredient Exclusion</td>
<td>The PRISM Ingredient Exclusion CV provides values for the prm:dietaryExclusion metadata field.</td>
</tr>
<tr>
<td>PRM Meal</td>
<td>The PRISM Meal CV provides values for the prm:meal metadata field.</td>
</tr>
<tr>
<td>PRM Recipe Source</td>
<td>The PRISM Recipe Source CV provides values for the prm:recipeSource metadata field.</td>
</tr>
<tr>
<td>PRM Skill Level</td>
<td>The PRISM Skill Level CV provides values for the prm:skillLevel metadata field.</td>
</tr>
<tr>
<td>PRM Special Occasion</td>
<td>The PRISM Special Occasion CV provides values for the prm:specialOccasion metadata field.</td>
</tr>
<tr>
<td>PRM Time</td>
<td>The PRISM Time CV provides values for the prm:otherTime metadata field.</td>
</tr>
</tbody>
</table>

### PRISM Image Controlled Vocabularies

<table>
<thead>
<tr>
<th>PMI Image Color</th>
<th>The PRISM Color CV provides values for the pmi:color metadata field.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMI Image Orientation</td>
<td>The PRISM Image Orientation CV provides values for the pmi:orientation metadata field.</td>
</tr>
<tr>
<td>PMI Season</td>
<td>The PRISM Season CV provides values for the pmi:season metadata field.</td>
</tr>
<tr>
<td>PMI Setting</td>
<td>The PRISM Image Setting CV provides values for the pmi:setting metadata field.</td>
</tr>
<tr>
<td>PMI Viewpoint</td>
<td>The PRISM Camera Viewpoint CV provides values for the pmi:viewpoint metadata field.</td>
</tr>
<tr>
<td>PMI Visual Technique</td>
<td>The PRISM Visual Technique CV provides values for the pmi:visualTechnique metadata field.</td>
</tr>
</tbody>
</table>

Table 6.1: PRISM Controlled Vocabularies
Normative References

[**AAT**] Getty Art and Architecture Thesaurus.
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[**DCMI**] Dublin Core Metadata Element Set, Version 1.1; Reference Description.

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