Publishing Requirements for Industry Standard Metadata

Publishing Requirements for Industry Standard Metadata

(PRISM)

Specification

Version 1.0 beta

August 28, 2000

Abstract

This document is the Publishing Requirements for Industry Standard Metadata (PRISM) specification. PRISM focuses on the format and presentation of content, reuse rights and restrictions. To that end, PRISM defines a MIME-based interchange format, an extensible metadata framework based on RDF, a vocabulary and controlled property values. We expect PRISM to be useful in automating clearance and reuse processes, both in traditional publishing contexts and in business-to-business relationships.

Working Group Members

Editors

Deren Hansen – Cogito, inc. (Formerly of WAVO corporation)
Cameron Pope (Invited Expert) – The Aboutbox, Inc.

Working Group Members

Donald Alameda - Sothebys.com (Integrated Automata)
Anna Bjarnestam - Getty Images
Linda Burman - Kinecta Corporation. *(co-chair and Working Group Founder)*
Ron Daniel - Metacode Technologies *(co-chair)*
Ari Davidow – ITWorld (IDG Publications)
Charlie Evett - MarketSoft
Lisa Frumkes - Getty Images
Chris Green - Time Inc.
Deren Hansen - Cogito, Inc.
Brad Husick - Vignette Corporation
Dianna Husum - Adobe Systems, Inc.
Paul Kramer - Condé Nast Publications
Roger Medlin - Artesia Technologies, Inc.
Glen Ochsenreiter - iCopyright.com
Cameron Pope (Invited Expert) - The Aboutbox, Inc. (Formerly of Quark, inc.)
Laird Popkin - Sothebys.com
Howie Rafal – Banta New Media, Inc.
Jay Rothchild – eLogic, Inc. (A wholly owned subsidiary of Cahners Business Information)
Justin Scroggs - Time Inc.

Status of This Document

This document is for review by the PRISM working group. The entire document is subject to change without notice. As such, it should not be circulated beyond the membership of the PRISM working group and PRISM network.

The PRISM working group, a joint effort of representatives from publishers and vendors in an initiative hosted by IDEAlliance, prepared this specification. Comments may be sent to the Working Group: prism@idealliance.org.

TABLE OF CONTENTS

1 Introduction

The Internet has provided publishers and content providers with many new revenue possibilities; it has also generated pressure because content providers often lack the means and the agility to pursue them. Repurposing content and supporting multiple media formats adds cost that cannot currently be recouped because there is no consensus about how to describe content, its structure and the purposes for which it may be used. Re-purposing, aggregation, and syndication efforts are currently fragmented. However, sharing a descriptive language will enable tools to create, store, manipulate, and distribute content.

A significant problem in current practice is that metadata is frequently discarded early in the creation process, only to be recreated later at greater expense and reduced accuracy. Only creating and preserving metadata throughout the entire content life cycle will make broad repurposing possible and profitable. A standard metadata vocabulary will enable general repurposing, improve content management, improve the reliability of aggregation and syndication, give individual publishers a powerful mechanism for re-using internal information and create opportunities for software vendors.

1.1 Purpose and Scope

The Publishing Requirements for Industry Standard Metadata (PRISM) specification defines an XML metadata vocabulary for syndicating, aggregating, post-processing and multi-purposing magazine, news, catalog, book and mainstream journal content. PRISM provides a framework for the interchange and preservation of content and metadata, and also provides a collection of controlled vocabularies to describe the content being exchanged.

Like the ICE protocol, 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 working group focused on four kinds of metadata:

- Metadata for the general-purpose description of resources as a whole
- Metadata about a resource's relationships to other resources.
- Metadata for specific purposes such as intellectual property rights and permissions.
- Inline metadata (that is, markup within the resource itself) when necessary to meet strong needs expressed by publishers, realizing that standards such as NITF exist to define inline markup.

1.2 Relationship to Other Specifications

There has been much work done on packaging and describing content, but this work has not yet been arranged into a coherent system. In the spirit of identifying existing work and adding new "glue" as needed, the PRISM working group established a program to evaluate existing standards to leverage their work, elicit scenarios, identify a framework, use elements from other specifications and only then develop new vocabularies.

1.2.1 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.

1.2.2 Resource Description Framework (RDF)

RDF [W3C-RDF] defines a model and XML syntax to represent and transport metadata. PRISM uses a metadata framework based on a simplified profile of RDF. However, PRISM compliant applications are required to generate metadata that can be processed by RDF processing applications.

1.2.3 Dublin Core

The Dublin Core [DCMI] metadata is designed to facilitate discovery of electronic resources in a manner similar to a library card catalog. The Dublin Core Metadata Initiative specifies a set of 15 general elements to describe resources. PRISM has adopted the Dublin core and its relation types as the starting point for its metadata. PRISM has defined some controlled values and recommended practices for using the Dublin Core vocabulary and has added additional terms when necessary.

1.2.4 NewsML

NewsML [IPTC-NEWSML] is an emerging standard 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. There is some overlap between the two standards, but PRISM and NewsML are largely complimentary to each other. The PRISM specification does leverage much of the work done in NewsML, making use of a number of elements defined in NewsML.

This version of the PRISM specification defines an interchange format based on MIME, because of the widespread adoption and implementation of MIME-aware tools and freely available code to process MIME messages. However, PRISM's controlled vocabularies have been specified in such a way that they can be used in NewsML. 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.

Future versions of this specification may define an interchange syntax that conforms to NewsML instead of MIME. Feedback from reviewers on this point is particularly requested.

1.2.5 News Industry Text Format (NITF)

NITF [IPTC-NITF] is another specification from the IPTC. NITF provides a DTD designed to mark up news stories. PRISM is a metadata vocabulary designed to describe resources and their relationship to other resources. Although NITF has some elements to specify metadata and header information that are duplicated in PRISM, there is a complimentary affinity between the two standards. A number of PRISM elements map to elements in the NITF DTD, and those mappings are called out later in this specification.

1.2.6 Information and Content Exchange (ICE)

ICE [ICE] manages and automates establishment of syndication relationships, data transfer, and results analysis. PRISM compliments ICE by providing an industry-standard vocabulary to automate content reuse and syndication processes. To quote from the ICE specification:

> *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 second half of the puzzle. PRISM, which aims to provide an industry standard vocabulary for the exchange and reuse of magazine, book, journal and news content, provides the first.

1.2.7 eXtensible Rights Markup Language (XrML)

XrML [XRML] is a standard developed by ContentGuard, Inc. to specify the behavior of trusted Digital Rights Management systems and repositories. PRISM is not a specification for Digital Rights Management. Rather, it describes the terms and conditions under which people may reuse content. In other words, it provides information about reuse rights and permissions for content components. Thus does not specify behavior that a practical trusted system repository can check, nor does it specify how an application out to *enforce these rights and permissions*. The treatment of derivative use rights in PRISM is complimentary but separate from the rights and uses that are specified in XrML.

1.2.8 Multipurpose Internet Mail Extensions (MIME)

MIME [RFC-2045] is a widely implemented standard for packaging multiple content items together in a single transmission. Due its widespread adoption and the availability of MIME-aware tools, this version of the PRISM specification recommends MIME as the means of packaging metadata and multiple associated resources in a single transmission. Feedback on the interest in MIME vs. NewsML is explicitly requested.

1.3 Additional Issues

1.3.1 Security

The PRISM specification deliberately does not address security, because the required levels of security can be achieved via existing and emerging Internet/Web security mechanisms. 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).

1.3.2 Redundancy

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 more than one place. The working group decided that redundancy should neither be encouraged nor avoided.

1.4 Definitions

1.4.1 Requirement Wording Note

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119. The PRISM specification also adds the normative term, “STRONGLY ENCOURAGES,” which should be understood as a requirement comparable to MUST in all but the most extraordinary circumstances.

Capitalization is significant; lower-case uses of the key words are intended to be interpreted in their normal, informal, English language way.

1.4.2 PRISM Semantic Definitions

These definitions are used throughout this document. Readers will most likely not fully understand these definitions without also reading through the specification.

authority file
One of the forms of a controlled vocabulary, in which a list of uniquely identified entities, such as companies, authors, or customers, is maintained over time.

content
Content, as it is used in the PRISM specification is a non-normative term assumed to be a resource or a collection of resources.

content provider
A publisher, business, portal site, person or entity making content available in any medium.

controlled vocabulary
A list of terms with a defined maintenance procedure and restricted update access. There are two major types of controlled vocabularies - *authority files* and taxonomies.

metadata
Information about a resource. In this specification, metadata is expressed as one or more *properties*

property
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]

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.

1.5 Structure of this Document

Section 1 provides an introduction and establishes some of the context for the PRISM specification. Only Section 1.4.1 "Requirement Wording Note" is normative.

Section 2 provides a non-normative overview of the major portions of the spec, using two scenarios and working out examples. This section is not normative.

Section 3 describes PRISM's policy towards identifiers and lays out the interchange framework for the specification.

Section 4 Gives a summary of namespaces and elements defined in PRISM.

Section 5 provides examples of using PRISM elements.

Section 6 gives detailed definitions of the elements that PRISM defines or specifies.

Section 7 describes vocabularies that PRISM uses as controlled values for various properties.

Section 8 consists of non-normative appendices.

2 Overview

This section provides a quick non-normative overview of the PRISM specification and the types of problems that it addresses.

2.1 Simple PRISM Scenarios

Two simple scenarios are used throughout this specification as the source of examples: a magazine producing a retrospective issue after a celebrity dies in an accident and a travel publisher syndicating content to an on-line portal site.

2.1.1 Celebrity Retrospective

Bubbles[1], a famous pop star, is killed in freak accident when a satellite crashes into her convertible while she is driving down the highway. *Pop Star* magazine wants to release a special retrospective issue, highlighting major events in her career.

Pop Star magazine searches through its archives to find the images and articles about Bubbles for the special issue. Names and times have been marked up in a standard way, so it is easy to perform a search to find photos and stories highlighting the rise of her career. Since *Pop Star* tags their content with rights information in a standard way, *Pop Star* knows exactly which images they can use for their special issue, whether they were created internally, purchased from a media house or provided by a freelance photographer.

2.1.2 Travel Content Syndication

Wanderlust, a major travel publication forms a business relationship with *travelmongo.com*, a travel portal. After Wanderlust goes to press, they syndicate all of their articles and sidebars to their content partners like *travelmongo.com*. Like many other publications, *Wanderlust* does not have the right to resell all of their images.

When *Wanderlust* creates syndication offers, an automated script searches through the metadata for the issues's content to ensure that anything that cannot be syndicated is removed from the syndication offer with alternatives substituted when possible. Since *Wanderlust* tags their 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 they syndicate their content, *travelmongo.com* can populate their 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 for them.

2.2 PRISM Overview

This section 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 using PRISM metadata elements to add

[1] Any resemblance to actual persons, living or dead, real or imaginary, is purely coincidental.

richer information to a travel article. Although the PRISM specification contains a large number of elements and controlled vocabulary terms, most of them are optional, so 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 that are targeted for reuse.

This is step-by-step example illustrates the major areas of the specification.

2.2.1 Basic Metadata

The elements in the Dublin Core form the basis for PRISM's metadata vocabulary. This minimal PRISM document uses some Dublin Core elements to describe a photo taken on the island of Corfu:

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:prism="http://prismstandard.org/1.0#"
         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://wanderlust.com/2000/08/CorfuBeach.jpg">
    <dc:identifier rdf:resource="wanderlust:2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models
    </dc:description>
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Photographer</dc:creator>
    <dc:contributor>Sally Smith, lighting</dc:contributor>
    <dc:format>image/jpeg</dc:format>
  </rdf:Description>
</rdf:RDF>
```

PRISM requires that resources have unique identifiers. In the above example, the photo is identified by a URL in the `rdf:about` attribute of the `rdf:description` element. The `dc:identifier` element can be used for other identifiers, such as ISBN numbers or system-specific identifiers. In the above example, the `dc:identifier` element contains an asset ID for *Wanderlust's* asset management system.

PRISM follows the case convention adopted in the RDF specification. All elements, attributes and attribute values begin with an initial lower case letter and subsequent words are capitalized. PRISM uses the convention of placing property values that are expressed as URIs, such as `dc:identifier` in the above example, in an `rdf:resource` attribute, and prose or non-URI values as element content, as seen in the `dc:description` element. This allows automated systems to easily determine when a property value is a URI.

PRISM Metadata elements are described in Section 4 - PRISM Metadata: Namespaces and Functional Groups.

2.2.2 Controlled Vocabularies

Property values in PRISM can come from controlled vocabularies. Controlled vocabularies are an important extensibility mechanism. Defining additional vocabularies for specialized uses is a way to extend descriptive power without resorting to prose explanations, adding additional elements and breaking the behavior of general-case tools. Controlled vocabularies are also necessary for automatically processing information.

With this travel photo, it is important to unambiguously note the location it was taken for future reference. Adding that this photo was taken in Greece, using ISO country codes, can be done as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:prism="http://prismstandard.org/1.0#"
         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://wanderlust.com/2000/08/CorfuBeach.jpg">
    <dc:identifier rdf:resource="wanderlust:2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models
    </dc:description>
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Photographer</dc:creator>
    <dc:contributor>Sally Smith, lighting</dc:contributor>
    <dc:format>image/jpeg</dc:format>
    <dc:coverage rdf:resource="iso3166-2:gr" />
  </rdf:Description>
</rdf:RDF>
```

PRISM defines a number of elements that can be used to cite custom controlled vocabulary terms used in a document. For more information see Section 4.10 - Authority File: PRISM Source Vocabulary. For more information on controlled vocabularies defined in this specification, see Section 8 - PRISM Controlled Vocabularies.

2.2.3 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 contained in a magazine article can be done as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:prism="http://prismstandard.org/1.0#"
         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://wanderlust.com/2000/08/CorfuBeach.jpg">
    <dc:identifier rdf:resource="wanderlust:2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models
    </dc:description>
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Photographer</dc:creator>
    <dc:contributor>Sally Smith, lighting</dc:contributor>
    <dc:format>image/jpeg</dc:format>
    <dc:coverage rdf:resource="iso3166-2:gr" />
    <prism:isPartOf rdf:resource=
     "http://wanderlust.com/2000/08/CorfuArticle.xml" />
  </rdf:Description>
</rdf:RDF>
```

For more information on relations, see Resource Relationships.

2.2.4 Resource Type and Category

Many different kinds of information are frequently lumped together as information about the 'type' of a resource. The PRISM specification breaks out three components:

- First, data types are indicated through the use of Internet Media Types (e.g. MIME types) in the `dc:format` element.
- Information on the stereotypical type of intellectual content, such as obituaries vs. election results, is indicated through the use of the `prism:category` element and the controlled vocabualry of resource categories.

- Finally, the type of presentation is indicated by the `dc:type` element and the controlled vocabulary of roles.

For example, take three different images, a photo, an illustration and a graph. All three are images, and could be conveyed as gif files, so the `dc:format` element for all three images will contain `image/gif`. However, the `dc:type` element for the three would be different, referring to the controlled vocabulary terms for photo, illustration and graph, respectively. This distinction is useful for searching and selecting content for reuse.

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:prism="http://prismstandard.org/1.0#"
         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://wanderlust.com/2000/08/CorfuBeach.jpg">
    <dc:identifier rdf:resource="wanderlust:2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models
    </dc:description>
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Photographer</dc:creator>
    <dc:contributor>Sally Smith, lighting</dc:contributor>
    <dc:format>image/jpeg</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#photo" />
    <dc:coverage rdf:resource="iso3166-2:gr" />
    <prism:isPartOf rdf:resource=
      "http://wanderlust.com/2000/08/CorfuArticle.xml" />
  </rdf:Description>

  <rdf:Description rdf:about="http://wanderlust.com/2000/08/CorfuSidebar.xml">
    <dc:identifier rdf:resource="wanderlust:2357846" />
    <dc:description>Accomodations and sights on Corfu</dc:description>
    <dc:format>text/xml</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#sidebar" />
    <prism:category
      rdf:resource="http://prismstandard.org/1.0/category.xml#review" />
    <prism:isPartOf rdf:resource=
     "http://wanderlust.com/2000/08/CorfuArticle.xml" />
  </rdf:Description>

  <rdf:Description rdf:about="http://wanderlust.com/2000/08/CorfuArticle.xml">
    <dc:identifier rdf:resource="wanderlust:2357847" />
    <dc:format>text/xml</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#article" />
    <prism:category
      rdf:resource="http://prismstandard.org/1.0/category.xml#review" />
    <prism:hasPart rdf:resource=
      "http://wanderlust.com/2000/08/CorfuVacation.xml" />
    <prism:hasPart rdf:resource=
      "http://wanderlust.com/2000/08/CorfuBeach.jpg" />
  </rdf:Description>
</rdf:RDF>
```

Since both the body text and the article have XML as their media format it would not be possible to tell which resource is the article and which resource is the body text based on the MIME type alone. The `dc:type` element makes the distinction between the article body and the article itself. The `prism:category` element makes a further distinction, that the article and body text present a review of a place.

For more information on roles, see the section 8.1 - Resource Role Vocabularies.

2.2.5 Rights

Intellectual property rights and restrictions for content reuse form a major part of the PRISM Specification. The PRISM Rights framework is designed to save time in determining whether a resource may be reused and if so, how it may be used. It is not designed to specify the behavior of digital rights management systems, that is the province of existing specifications like XrML.

The travel article description has been marked up to show the rights for the text, article and photo. In this simple case, *Wanderlust* has complete rights to reuse the article and the text, but they received the beach photo from a freelance photographer who did not give *Wanderlust* permission to reuse it.

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:prism="http://prismstandard.org/1.0#"
         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://wanderlust.com/2000/08/CorfuBeach.jpg">
    <dc:identifier rdf:resource="wanderlust:2357845" />
    <dc:description>Photograph taken at 6:00 am on Corfu with two models
    </dc:description>
    <dc:title>Walking on the Beach in Corfu</dc:title>
    <dc:creator>John Photographer</dc:creator>
    <dc:contributor>Sally Smith, lighting</dc:contributor>
    <dc:format>image/jpeg</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#photo" />
    <dc:coverage rdf:resource="iso3166-2:gr" />
    <prism:isPartOf rdf:resource=
      "http://wanderlust.com/2000/08/CorfuArticle.xml" />
    <dc:rights rdf:parseType="resource">
      <rdf:value>This image cannot be reused without written permission
        from Freelance Photographer, inc.</rdf:value>
      <prism:copyright>Copyright (c) 2000 Freelance Photographer,
         inc. </prism:copyright>
      <prism:isCopyrighted>yes</prism:isCopyrighted>
      <prism:isForReuse>no</prism:isForReuse>
    </dc:rights>
  </rdf:Description>

  <rdf:Description rdf:about="http://wanderlust.com/2000/08/CorfuSidebar.xml">
    <dc:identifier rdf:resource="wanderlust:2357846" />
    <dc:description>Accomodations and sights on Corfu</dc:description>
    <dc:format>text/xml</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#sidebar" />
    <prism:category
      rdf:resource="http://prismstandard.org/1.0/category.xml#review" />
    <prism:isPartOf rdf:resource=
      "http://wanderlust.com/2000/08/CorfuArticle.xml" />
    <dc:rights rdf:parseType="resource">
      <rdf:value>Wanderlust can use this sidebar without
        restrictions</rdf:value>
      <prism:copyright>Copyright (c) 2000 Wanderlust Publications,
         inc.</prism:copyright>
      <prism:isCopyrighted>yes</prism:isCopyrighted>
      <prism:isForReuse>yes</prism:isForReuse>
      <prism:providerType
        rdf:resource="http://prismstandard.org/1.0/provider.xml#internal"/>
      <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#all"/>
```

```
    </dc:rights>
  </rdf:Description>

  <rdf:Description rdf:about="http://wanderlust.com/2000/08/CorfuArticle.xml">
    <dc:identifier rdf:resource="wanderlust:2357847" />
    <dc:format>text/xml</dc:format>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#article" />
    <prism:category
      rdf:resource="http://prismstandard.org/1.0/category.xml#review" />
    <prism:hasPart rdf:resource=
      "http://wanderlust.com/2000/08/CorfuVacation.xml" />
    <prism:hasPart rdf:resource=
      "http://wanderlust.com/2000/08/CorfuBeach.jpg" />
    <dc:rights rdf:parseType="resource">
      <rdf:value>Wanderlust can use this article without
        restrictions</rdf:value>
      <prism:copyright>Copyright (c) 2000 Wanderlust Publications,
         inc.</prism:copyright>
      <prism:isCopyrighted>yes</prism:isCopyrighted>
      <prism:isForReuse>yes</prism:isForReuse>
      <prism:providerType
        rdf:resource="http://prismstandard.org/1.0/provider.xml#internal"/>
      <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#all"/>
    </dc:rights>
  </rdf:Description>
</rdf:RDF>
```

More information about Rights and Permissions in PRISM is available in the section: Rights and Permissions.

3 PRISM Framework

The PRISM specification defines an XML metadata vocabulary to assist in the re-purposing, syndication, and distribution of content. The PRISM framework is designed to:

- Identify resources.
- Describe resources.
- Relate resources to each other, and
- Exchange resources with attached metadata.

PRISM encourages applications to use URIs to identify resources, although it is possible to use other identification schemes.

In PRISM, content is composed of related resources. A magazine article, for example, may contain body text, a figure, and a sidebar. The figure, in turn, contains a caption, a chart displaying some data, and a background image. These individual resources and their assembly into a coherent composition need to be described for repurposing.

PRISM uses a subset of the W3C's Resource Description Framework (RDF) to organize resource metadata. RDF describes the structure of collections of resources and provides descriptive metadata about them. PRISM uses and extends relation types defined by the Dublin Core to define ways that resources can be related. [DCMI-R]

PRISM defines a MIME-based syntax to exchange content with the metadata in one stream. Applications using PRISM can use ICE as a protocol to exchange information by sending a PRISM RDF document as payload and allowing subscriber to retrieve the resources that are described in the PRISM RDF document.

Note: The mechanism by which MIME messages containing PRISM metadata and resources are sent using ICE is a current topic for coordination efforts between the PRISM Working Group and the ICE Authoring Group. This specification is expected to change between now and its full release.

3.1 Identifiers

In order to describe or syndicate resources, and to accommodate alternative versions, corrections and retractions, all resources MUST have a unique identifier. In many cases, the URL to the resource serves as the unique identifier.

A resource is identified by the content of the `rdf:about` attribute in the `rdf:description` element. However, resources can have many identifiers specified with the `dc:identifier` element. For example, a resource can be identified by a URL and by an internal asset ID that an organization would use to access it in their database. PRISM-compliant applications MUST maintain the unique identifier(s) provided on a resource.

PRISM has no policy on the assignment of identifiers, other than that the party assigning an identifier not assign the same identifier to a different resource, using whatever definition of 'different' the assigning party deems appropriate.

The PRISM specification adopts a pragmatic definition of identity: two resources are considered to be 'the same' if they have the same unique identifier. The party assigning the identifier is the sole arbiter of what they mean by 'the same'." Note that this definition does not imply that two resources are different if their identifiers are different. Different identifiers can be assigned to the same resource. If the identifiers are the same, it is the same resource. Many resources will have multiple identifiers assigned to them.

PRISM does not require that all resources carry the same identifier through their entire lifecycle. If the publisher assigns a new identifier, the publisher MUST retain information on the origin and licensing of the resource so that someone later in its lifecycle can determine how to obtain the rights to reuse it.

PRISM STRONGLY ENCOURAGES all compliant systems to use URIs to encode unique identifiers. [See RFC-2396]

3.2 PRISM Profile of the Resource Description Framework

After uniquely identifying resources, there must also be a way to provide resource metadata. RDF provides a framework to tie metadata to the resources that it describes. The PRISM specification defines a 'profile' of RDF – a restricted subset of RDF that all PRISM-compliant software must support. Documents that validate against the PRISM DTD will conform to this subset of RDF, so it is not necessary to be an RDF expert in order to create PRISM documents.

Applications conforming to the PRISM specification MUST produce correct RDF documents that can be read by any RDF-compliant software. PRISM-compliant software does not have to be capable of processing any arbitrary RDF documents.

The working group explicitly requests feedback on the PRISM's use of RDF as a metadata framework.

3.2.1 Constraint 1: Containers

To keep the structure of metadata simple, PRISM does not use RDF container elements such as sequences,

alternatives or bags. The formal grammar for RDF [W3C-RDF] specifies:

```
[6.1] RDF ::= ['<rdf:RDF>'] obj* ['</rdf:RDF>']
[6.2] obj ::= description | container
```

For PRISM systems, the optional `rdf:RDF` wrapper element is required, and its child elements are restricted to being `rdf:description` elements. The production that replaces productions 6.1 and 6.2 for PRISM systems is:

```
RDF ::= '<rdf:RDF' namespace_decls '>' description+ '</rdf:RDF>'
```

3.2.2 Constraint 2: rdf:aboutEachPrefix

PRISM descriptions MUST NOT use the `rdf:aboutEachPrefix` attribute. Production [6.8] of the RDF M&S specification thus becomes:

```
AboutEachAttr ::= ' aboutEach="' URI-reference '"'
```

3.2.3 Constraint 3: rdf:value Attribute

PRISM descriptions MUST NOT use an `rdf:value` attribute. Instead, they MUST use an `rdf:value` child element.

3.2.4 Further Qualifications

No other overall restrictions in the allowed RDF syntax are specified in this section. However, implementers are advised to pay particular attention to two points:

1) The sections defining various PRISM elements will typically restrict the data types of values for elements, so general-purpose RDF processing is unlikely to be needed.

2) If general RDF handling is NOT provided in an implementation, the implementation must decide how it will deal with unsupported descriptive elements. The PRISM specification does not preclude other descriptive elements, although their interoperation cannot be guaranteed.

3) To aid automated processing of PRISM metadata, this specification defines a separate namespace for PRISM elements suitable for in-line markup. Thus, `prism:org` is an RDF statement and `pim:org` is an organization as in-line markup.

3.2.5 Conventions for Property Values

To aid in the automatic processing of PRISM documents, PRISM utilizes some conventions in expressing values of RDF properties.

Resources and controlled vocabulary entries are referenced with the `rdf:resource` attribute. A book can be identified by its ISBN number as follows:

```
<dc:identifier rdf:resource="urn:isbn:0-932592-00-7"/>
```

Human readable text is represented as element content:

```
<dc:title>Juggling for the Complete Klutz</dc:title>
```

The `rdf:resource` attribute is also used to refer to controlled vocabulary entries:

```
<dc:publisher rdf:resource="http://bookmongo.com/publishers#klutz" />
```

As a result, PRISM elements will frequently contain textual descriptions of be empty, a content model that is not expressible in legal DTD syntax. The notion is that `#PCDATA` is for human-readable strings, while `rdf:resource` refers to an out-of-line resource or a controlled-vocabulary entry.

3.3 Interchange Syntax

After a resource has been identified and described, it must also be possible to exchange the resource along with its metadata. It is convenient to be able to refer to the media in a flexible way. Resources can be referenced out-of-line or provided in the current data stream. PRISM uses Multipurpose Internet Mail Extensions [RFC-1521] to encapsulate PRISM information in a way that will both support external and internal media references.

3.3.1 Encapsulating and Referencing Resources

To express resources and how they are related, PRISM encapsulates resources and their metadata in a `multipart/related` document. [RFC-2387]

When using MIME to package PRISM metadata and associated resources, the part referenced by the `start` MIME header is an `application/prism+rdf+xml` document containing PRISM metadata [IETF-XML-MEDIA].

PRISM-compliant implementations SHOULD support the basic *http* and *ftp* URL schemes to reference resources. Implementations exchanging data using MIME SHOULD support the *cid* scheme as defined in RFC 2392 to reference content in different MIME parts.

3.3.2 Referencing Content Internally

To refer to a resource in the same multipart message, the `rdf:about` attribute of the `rdf:description` element contains a URI using the *cid* scheme as follows:

```
<rdf:description rdf:about="cid:12345678" />
```

3.3.3 Referencing Content Externally

To refer to a resource on an external server, the `rdf:about` attribute of the `rdf:description` element contains a URL for location of the resource. For example:

```
<rdf:description rdf:about="ftp://images.yourcompanynamehere.com">
```

3.3.4 Encoding Binary Data

Resources in a binary format can either be sent as binary data or transfer encoded. MIME provides an encoding-type header that can be handled by software that understands the encoding. For base64 encoding the header looks like:

```
Content-transfer-encoding: base64
```

It is generally best to save the data in binary format because encoded binary data is about 30 percent larger than non-encoded binary data. However when embedding data into XML documents or occasionally when working with legacy software, it is impossible to embed raw binary data. Base64 encoded data is safe for old email gateways and for embedding in XML documents.

3.4 MIME Packaging Example

```
MIME-Version: 1.0
Content-Type: multipart/related; boundary=random-boundary-string
        start=PRISM_Metadata

--random-boundary-string
Content-ID: PRISM_Metadata
Content-Type: application/prism+rdf+xml; charset=UTF-8

<?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/1.0#"
    xmlns:dc="http://purl.org/dc/elements/1.1#"
    xmlns:psv="http://prismstandard.org/1.0/psv#">

  <rdf:Description rdf:about="cid:12345678">
    <dc:identifier rdf:resource="cnp:VM-1992-02-0222-0202020202" />
    <dc:title>Twist and Shout</dc:title>
    <dc:type
      rdf:resource="http://prismstandard.org/1.0/resourcetypes.xml#photo" />
    <dc:description>Bubbles, live in Detroit</dc:description>
    <dc:subject rdf:parseType="resource">
      <prism:subjectCode rdf:resource="SIC:79" />
    </dc:subject>

    <dc:format>image/gif</dc:format>
    <dc:creator>John Doe</dc:creator>
    <dc:source rdf:resource =
       "URN:SICI:1046-8188(199501)13:1%3C6:FTTHBI%3E2.0.TX;2-4"/>

    <dc:rights rdf:parseType="resource">
      <rdf:value>This image can be reused without restriction</rdf:value>
      <prism:copyright>Copyright (C) 2000, Pop Star Magazine, inc. All rights
        reserved.</prism:copyright>
      <prism:isForReuse>yes</prism:isForReuse>
      <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#all" />
    </dc:rights>
  </rdf:Description>

  <!-- Provide a citation for sic:79 -->
  <rdf:Description rdf:about="sic:79" >
    <psv:code>79</psv:code>
    <psv:label>Arts and Entertainment</psv:label>
    <psv:vocabulary>SIC (Std. Industry Classification)
        1987</psv:vocabulary>
  </rdf:Description>
</rdf:RDF>

--random-boundary-string
Content-Type: image/gif
Content-ID: 12345678
Content-Transfer-Encoding: binary

image binary

--random-boundary-string--
```

4 PRISM Metadata: Namespaces and Functional Groups

4.1 Namespaces

The PRISM specification makes use of XML Namespaces [W3C-XML-NS] to insure unique elements when reusing existing vocabularies. Every PRISM metadata document MUST declare the namespaces it uses.

Resource Description Framework	xmlns:rdf=”http://www.w3.org/1999/02/22-rdf-syntax-ns#”
Dublin Core	xmlns:dc=”http://purl.org/dc/documents/rec-dces-19990702.htm”
PRISM	xmlns:prism=”http://prismstandard.org/1.0#”
PRISM Source Vocabulary	xmlns:psv=”http://prismstandard.org/1.0/psv#”
PRISM Inline Markup	xmlns:pim=”http://prismstandard.org/1.0/pim#”

The following sections give an overview of the elements from each vocabulary employed in the PRISM specification.

4.2 Resource Descriptors

These elements from the Dublin Core form the bases for PRISM’s descriptive metadata.

For content that is being reused, there is a subtle complication that centers around exactly which resource is being described. As an example, consider an image/gif file, which is a scan of a photograph of the Mona Lisa. Who is the creator of the file? Is it Leonardo DaVinci, or the person who actually ran the scanner and cropped the results? For the purposes of discovery, Da Vinci should be. But for the purposes of workflow management, it should be the latter.

PRISM resolves this ambiguity through the following rule: Dublin Core elements apply to the resource being described. For a scanned photograph of the Mona Lisa, `dc:creator` would list the scaner operator as the creator of the GIF.

Element	**Role**
dc:identifier	Every PRISM resource MUST have an identifier. dc:Identifier is the element where an identifier is explicitly asserted.
dc:title	The name by which the resource is known. Synonymous with headline.
dc:creator	The primary creator of the resource.
dc:contributor	Secondary creators.
dc:language	The principal language of the resource.
dc:description	A description of the resource.
dc:format	The format of the resource.
dc:type	The nature or genre of the presentation of the resource’s content.
prism:category	The nature of the intellectual content of the resource.

4.3 Provenance

These elements describe the supply chain for a resource to indicate what the source material for a resource was and through which organizations the resource has passed. The distinction between the publisher, distributor, and service properties is subtle, and may be determined by contractual agreements rather than clear definitions.

PRISM uses the `source` property to identify the original creator of the resource (in the previous Mona Lisa

example, Da Vinci and the photographer can be listed as sources for the scanned photograph), the `publisher` property to identify the primary provider of the information (such as a major wire service), and the `distributor` property to identify other members of the distribution chain, if any. The `service` property identifies a particular service of the provider, such as "technology news".

Element	Role
dc:publisher	An identifier for the supplier of the resource.
prism:distributor	An identifier for the distributor of the resource.
prism:service	An identifier for part of a newsfeed.
dc:source	An identifier for source material for the resource.

4.4 Timestamps

There are several times that mark the major milestones in the life of a news resource: The time the story is published, the time it may be released (if not immediately), the time it is received by a customer, and the time that the story expires (if any).

PRISM timestamps appear 0 or 1 times.

Element	Role
prism:creationTime	Date and time the identified resource was first created.
prism:expireTime	Date and time when the resource may no longer be distributed.
prism:modifyTime	Date and time the resource was last modified.
prism:publicationTime	Date and time when the resource is released to the public.
prism:releaseTime	Earliest date and time when the resource may be distributed.
prism:receivedTime	Date and time when the resource was received on current system.

4.5 Subject Description

These elements describe the subject matter of a resource. Best practice is for `dc:subject` to contain subject description elements that reference controlled vocabulary terms. If that is not possible, `dc:subject` can also contain a prose description of the subject. Best practice is for subject description elements to reference controlled vocabulary terms such as the IPTC Subject Reference System.

Element	Role
dc:coverage	The extent or scope of the content of the resource. Typically geographic locations or periods of time.
dc:subject	The subject of the resource.
prism:subjectCode	A reference to a controlled term describing the subject matter of the resource.
prism:subjectCoverage	The extent or scope of the content of the resource.
prism:subjectType	The nature or genre of the content of the resource.
prism:subjectOrg	An organization referred to in or described by the resource.
prism:subjectEvent	An event referred to in or described by the resource.
prism:subjectIndustry	An industry referred to in or described by the resource.
prism:subjectLocation	A location referred to in or described by the resource.
prism:subjectPerson	A person referred to in or described by the resource.
prism:subjectURL	A URL referred to in or described by the resource (but not the URL of the resource itself).

For indication of the subject of a resource, PRISM-compliant applications SHALL use the dc:subject or dc:coverage elements.

4.6 Resource Relationships

The following elements identify resources that are related and indicate the nature of the relation. They can model containment relations – this article contains this photo, story text and caption; formats – this word document exists in HTML, XML and PDF; alternatives – an image that cannot be reused has alternatives that can be; and many other types of relations.

Element	Role
dc:relation	A reference to a related resource. Best practice is to use one of the elements listed below to better define how the resources are related.
prism:preference	Indicates a preference level for relations like hasVersion or hasSubstitute.
prism:isPartOf	The described resource is a physical or logical part of the referenced resource. [DCMI-R]
prism:hasPart	The described resource includes the referenced resource either physically or logically. [DCMI- R]
prism:isVersionOf	The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format. [DCMI- R]
prism:hasVersion	The described resource has a version, edition, or adaptation, namely, the referenced resource. Changes in version imply substantive changes in content rather than differences in format. [DCMI- R]
prism:isFormatOf	The described resource is the same intellectual content of the referenced resource, but presented in another format. [DCMI- R]
prism:hasFormat	The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format. [DCMI- R]
prism:references	The described resource references, cites, or otherwise points to the referenced resource. [DCMI- R]
prism:isReferencedBy	The described resource is referenced, cited, or otherwise pointed to by the referenced resource. [DCMI- R]
prism:isBasedOn	The described resource is a performance, production, derivation, translation, adaptation or interpretation of the referenced resource. [DCMI- R]
prism:isBasisFor	The described resource has a performance, production, derivation, translation, adaptation or interpretation, namely the referenced resource. [DCMI- R]
prism:requires	The described resource requires the referenced resource to support its function, delivery, or coherence of content. [DCMI- R]
prism:isRequiredBy	The described resource is required by the referenced resource, either physically or logically. [DCMI- R]
prism:isAlternativeFor	The described resource can be substituted for the referenced resource.
prism:hasAlternative	The described resource has an alternative version that can be substituted, namely the referenced resource.
prism:isCorrectionOf	The described resource is a corrected version of the referenced resource.
prism:hasCorrection	The described resource has a correction, namely the referenced resource.

4.7 Rights and Permissions

The PRISM rights and permissions vocabulary is designed to optimize reuse and clearance processes by having an obvious indication of how reusable a resource is. PRISM is intended for parties that already have an established business relationship to convey details abou how syndicated content may be reused.

The design goals of rights and permissions are:

- To be able to describe reuse rights in a precise and consistent manner.

- To minimize the amount of metadata that needs to be applied to resources that will not be reused.
- To make simple cases such as no rights or unrestricted use simple to specify, while providing the richness to indicate any type of usage or restriction.

However, PRISM is NOT concerned with digital rights enforcement. PRISM does not specify policy or provide instructions to trusted viewers and repositories on how they should behave. PRISM also does not specify fee or payment details. Standards such as XrML exist to serve those needs.

4.7.1 General Rights Information

This section defines some elements for basic rights information such as a copyright statement, a location on an external information where detailed rights information can be accessed, whether any specified rights are for exclusive use of a resource, and a reuse flag. If the reuse flag is set to be 'no' it means that the resource is not intended for reuse, so there is no need to bother specifying any additional metadata, and it can be used as a filter for searches through an archive so reviewers do not have to waste time looking at content that cannot be reused.

Term	Description
dc:rights	Container element for all rights data
prism:rightsLocation	A URL where a definitive version of the rights to this resource may be obtained.
prism:isForReuse	A yes/no flag indicating whether this resource may be reused.
prism:isCopyrighted	A yes/no flag indicating whether a copyright exists on this resource.
prism:copyright	A copyright statement for this resource.
prism:isExclusive	A yes/no flag indicating whether the specified rights are for exclusive use of this resource.

4.7.2 Contract Information

This section describes a number of terms to keep track of legal agreements to use content and any stakeholders in the resale of a resource, such as the publisher, rights holder, copyright holder, and content copyright holder.

It is often important to know what kind of provider supplied the resource: image house, freelancer or internal staff for legal reasons. Terms are defined to keep track of the date entered into contract and the range of time, if any, that the contract applies. Dates are specified in W3C profile of ISO format. Durations can be a range of time or a calendar interval.

Term	Description
prism:contractDate	Date that a contractual agreement was made for use of this resource.
prism:contractDuration	The time period under which the contract applies.
prism:providerType	The type of person or agency that provided this resource.
dc:publisher	Contact Information for the provider of this resource.
prism:rightsHolder	Contact information for the rightsholder of this resource, if different.
prism:contentCopyrightHolder	Contact information for the individual or entity that holds a copyright to the contents of this resource, if applicable.

4.7.3 Uses, Rights and Restrictions

PRISM specifies three types of rights relevant to the reuse of a resource. These terms have are adapted from XrML:

- **embed** – the right to include this resource in another derivative work
- **extract** – the right to remove a portion of this resource, such as cropping an image or removing

copy from the end of a news story.

- **edit** – The right to edit this resource, such as downsampling an image or adding additional copy to a story.
- **all** – All of the above rights.

These rights can be granted for uses of a resource. PRISM specifies the following usage types:

- **geography** – Making a resource available in certain geographic areas.
- **time** – Making a resource available during certain periods of time.
- **industry** – Making a resource available in a publication for a certain industry domain.
- **format** – Making a resource available in a certain format: in a print publication, on the Web, on a cell phone or an eBook.
- **manipulation** – Making particular modifications to a resource such as reducing the number of colors, superimposing other content. The right to include part of a work, i.e. cropping is handled by the edit right.

Types of rights and uses for a resource are specified using controlled vocabulary terms. PRISM has specified a set of commonly used rights and uses. It is possible to extend the available set of rights and uses by defining other vocabularies for rights and uses and referencing them instead.

These are the elements that are used in order to specify rights, uses and restrictions:

Term	Description
prism:right	References a controlled-vocabulary term for the type of right to be granted
prism:restrictions	References uses that are restricted.
prism:use	Specifies a use that is allowed or restricted
prism:usageType	A controlled vocabulary term for the type of use to be allowed or restricted.
prism:usage	A human-readable statement or controlled vocabulary term defining to what extent a use is allowed or restricted.

4.7.4 Semantics of rights and uses

This section describes how rights and restrictions is PRISM documents are interpreted.

One goal of the rights vocabulary is to make the all and nothing cases easy to specify. Commonly, a content provided either has no rights to reuse a resource or owns it outright and can do whatever they want to with it. If no rights are specified at all, then no rights have been granted. If the rights type `all` has been specified, then all rights are granted.

All rights have to be explicitly granted. If a right is not specified, it is not granted. So if there is no

```
<prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#edit" />
```

or

```
<prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#all" />
```

statement in a PRISM document, then no rights to edit a resource are granted.

In this example, the right to use a resource in a derivative work is granted, but the right to edit it or extract a piece of it are not granted:

```
<rdf:description rdf:about="http://wanderlust.com/photos/BelizeHilton.jpg>
  <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#embed" />
</rdf:description>
```

Uses are implicitly granted. If a type of use is not specified, then that use is allowed to the extent that it is

not restricted under <prism:restrictions>. In the above example, publication is allowed anywhere, in any format, for any time period and in any industry domain, as long as it is not edited or cropped in any way. If a use is specified, then exactly the specified uses are granted. In the following example a resource can be published in an unaltered form in the US or Canada. Since no uses based on time, geography or industry have been specified, those uses are not restricted.

```
<rdf:description
rdf:about="http://wanderlust.com/photos/BelizeBeach20000709.jpg">
  <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#embed" />
  <prism:use rdf:parseType="resource">
    <prism:usageType
      rdf:resource="http://prismstandard.org/1.0/usage.xml#geography" />
    <prism:usage rdf:resource="iso3166-2:US" />
    <prism:usage rdf:resource="iso3166-2:CA" />
  </prism:use>
</rdf:description>
```

Uses can be restricted under <prism:restrictions>. The following example specifies that a resource can be published in the US, or Canada, but publication is restricted between September 1st and the 30th, 2000:

```
<rdf:description
rdf:about="http://wanderlust.com/photos/BelizeBeach20000709.jpg">
  <prism:restrictions rdf:parseType="resource">
    <prism:use rdf:parseType="resource">
      <prism:usageType
        rdf:resource="http://prismstandard.org/1.0/usage.xml#time"/>
      <prism:timeFormat
        rdf:resource="http://prismstandard.org/1.0/time.xml#range"/>
      <prism:timeFrom>20000901T0:00:00</prism:timeFrom>
      <prism:timeUntil>20000930T0:00:00</prism:timeUntil>
    </prism:use>
  </prism:restrictions>
  <prism:right rdf:resource="http://prismstandard.org/1.0/right.xml#embed" />
  <prism:use rdf:parseType="resource">
    <prism:usageType
      rdf:resource="http://prismstandard.org/1.0/usage.xml#geography" />
    <prism:usage rdf:resource="iso3166-2:US" />
    <prism:usage rdf:resource="iso3166-2:CA" />
  </prism:use>
</rdf:description>
```

4.8 Contact Information

This section defines a basic set of elements to provide contact information for an individual or an entity.

Term	Description
prism:contactName	Contact Name
prism:contactAddress	Street address.
prism:contactURL	Machine-resolvable URL
prism:contactPhone	Phone number
prism:contactFax	Fax number
prism:contactEmail	Email address

4.9 Ranges of Time

Rights can be granted for publication for or during a specified period of time. Some content may be

embargoed, so publication can be restricted during certain periods of time. Dates and times are represented using the W3C-defined profile of ISO 8601.

Term	Description
prism:timeFrom	Starting point in time for a time range or a calendar interval.
prism:timeUntil	Ending point in time for a range.
prism:timeMoment	Moment in time.

4.10 Authority File: PRISM Source Vocabulary

Several elements in PRISM-approved or PRISM-extended namespaces take values that are intended to come from *controlled vocabularies*. Controlled vocabularies are managed lists of terms. They may be hierarchically structured subject classification systems like the Dewey Decimal Code or the IPTC's Subject Reference System. Or they may be large, flat, lists of names of companies, people, places, etc. Such lists might come from an external source, or from a company's internal database systems.

The PRISM specification provides RDF Property Types for describing terms in a controlled vocabulary. Each element is uniquely identified with a URI. (Note that it is NOT a requirement that the URI be globally resolvable).

Other information, such as whether the controlled term describes a for-profit vs. non-profit organization can be handled with other RDF Property Types.

Note: This section is subject to change, as the PRISM working group is investigating the adoption of NewsML's notion of citing controlled vocabularies.

Element	Role
psv:broaderTerm	Links to a broader (more general) concept in a vocabulary. For example, from 'dog' to 'mammal'.
psv:code	Provides a machine-readable identifier for the vocabulary from which the term comes.
psv:definition	Provides a human-readable definition for the item in the vocabulary.
psv:label	Provides a human-readable label for the term in the vocabulary. Multiple labels can be provided with different xml:lang attributes.
psv:narrowerTerm	Links to a narrower (more specific) concept in the vocabulary. For example, from 'dog' to 'Dalmation'. Multiple NT links are allowed.
psv:relatedTerm	Links to a 'related term' in the vocabulary, where the nature of the relation is not specified.
psv:synonym	Alternate labels (synonyms) for the same property.
psv:vocabulary	Provides a human-readable string identifying the vocabulary from which the term comes.

PRISM's recommended practice is that either the name of the publisher be supplied as content (e.g. `<dc:publisher>Random House</dc:publisher>`) or that a controlled term from an authority file be used. For example:

```
<dc:publisher rdf:resource="pubs:RH" />

. . .

<rdf:description rdf:about="pubs:RH">
    <psv:vocabulary>Publishers of the World</psv:vocabulary>
    <psv:code>RH</psv:code>
    <psv:label>Random House</psv:label>
</rdf:description>
```

4.10.1 Example – Citing Source Vocabularies

```
<rdf:RDF
  xmlns:dc="http://purl.org/metadata/DublinCore#"
  xmlns:rdf="http://www.w3.org/TR/RDFM&S#"
  xmlns:psv="http://www.idealliance.org/namespaces/PRISM/SV/v2/">
  <!-- Dublin Core description of a document. Note use of
     both strings and references to other resources as
     values -->
 <rdf:Description rdf:about=http://www.foo.com/index.html>
   <dc:creator>John Smith</dc:creator>
   <dc:subject rdf:resource="iptc:sports"/>
 </rdf:Description>
 <!-- More info about a subject descriptor term -->
 <rdf:Description rdf:about="iptc:sports">
   <psv:vocabulary>IPTC SRS</psv:vocabulary>
   <psv:label>Sports</psv:label>
 </rdf:Description>
</rdf:RDF>
```

5 In-line Markup

Much important information, such as dates or companies mentioned in the text of an article, will be marked up inline, and organizations may choose not to duplicate all that data in subject description elements. For that reason, the PRISM working group felt it necessary to define a small number of common elements for inline markup.

The next version of the NITF will contain a mechanism to reference controlled vocabularies and authority files. It is likely that future versions of the PRISM specification will specify a number of elements from NITF to use instead of defining in-line markup itself.

Element	Role
pim:location	Marks a geographical location.
pim:objectTitle	Marks the title of a book, film, painting, product, etc.
pim:org	Marks the name of a government, department, company, charity, club, or any other organization.
pim:person	Marks the name of a person (real or imaginary).
pim:quote	Marks the words attributed to a specific person.

A brief example of standard NITF markup is:

```
In heavy trading, <org>IBM</org> closed up slightly.
```

The same sentence, in PRISM markup, might appear as

```
In heavy trading, <pim:org xlink:href="NYSE:IBM"
xlink:type="simple">IBM</pim:org> closed up slightly.
```

The `xlink:href="NYSE:IBM"` attribute tells us not only that the span of text "IBM" is an organization, but also provides a URI to uniquely identify that organization.

RDF NOTE: The XML Linking working group is working with the RDF community to define a transformation from Xlinks to the RDF model, in order to allow Xlinks to serve as an alternate syntax for RDF, allowing RDF-aware processing tools to identify such Xlinks as metadata.

6 Examples of PRISM Usage

6.1 Example – Photo with no restrictions

Following is a simple example to show how all the elements and controlled terms fit together. The following RDF document uses the PRISM rights vocabulary to describe an image from a freelance photographer. In this case, *Pop Star Magazine* negotiated the right to resell the photo as long as the photo is not edited.

```
<?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/metadata/dublin_core#"
  xmlns:prism="http://prismstandard.org/1.0#">

  <rdf:Description
      rdf:about="http://popstarmag.com/photos/20000807/bubblestempo.jpg">

    <dc:identifier rdf:resource="http://freelance.com/photos/20000807/13245"/>
    <dc:description>Bubbles leaving the Tempo restaurant in Los
        Angeles.</dc:description>
    <dc:rights rdf:parseType="resource">
      <rdf:value>This image can be reused as long as it is not modified in
        any way.</rdf:value>
      <prism:copyright>Copyright (c) 2000 Pop Star Magazine,
         inc. All Rights Reserved.</prism:copyright>
      <prism:isCopyrighted>yes</prism:isCopyrighted>
      <prism:isForReuse>yes</prism:isForReuse>
      <prism:providerType
        rdf:resource="http://prismstandard.org/1.0/provider.xml#internal"/>
      <!-- Cropping and embedding okay. Editing not okay. -->
      <prism:right
        rdf:resource="http://prismstandard.org/1.0/right.xml#extract"/>
      <prism:right
        rdf:resource="http://prismstandard.org/1.0/right.xml#embed"/>
    </dc:rights>
  </rdf:Description>

</rdf:RDF>
```

7 Element Definitions

7.1 Resource Descriptors

7.1.1 dc:contributor

Name	Contributor
Identifier	dc:contributor
Definition	An entity responsible for making contributions to the content of the resource.
Comment	Examples of a Contributor include a person, an organization, or a service. Typically, the name of a Contributor should be used to indicate the entity.
PRISM Example Model	(#PCDATA | prism:Descriptor | {empty}) with rdf:resource attribute pointing to the authority file reference.
Attributes	None
Maps To	

7.1.2 dc:coverage

Name	Coverage
Identifier	dc:coverage
Definition	The extent or scope of the content of the resource.
Comment	Coverage will typically include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and that, where appropriate, named places or time periods be used in preference to numeric identifiers such as sets of coordinates or date ranges.
PRISM	
Example	
Model	(#PCDATA)
Attributes	None
Maps To	

7.1.3 dc:creator

Name	Creator
Identifier	dc:creator
Definition	An entity primarily responsible for making the content of the resource.
Comment	Examples of a Creator include a person, an organization, or a service. Typically, the name of a Creator should be used to indicate the entity.
PRISM	The name of one person or organization primarily responsible for this resource.
Example	
Model	(#PCDATA | prism:Descriptor | {empty}) with rdf:resource attribute pointing to the authority file reference.
Attributes	None
Maps To	

7.1.4 dc:date

Name	Date
Identifier	dc:date
Definition	A date associated with an event in the life cycle of the resource.
Comment	Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and follows the YYYY-MM-DD format.
PRISM	The date and time the resource was published, following the format in W3C-NOTE-datetime (see References).
Example	
Model	(#PCDATA)
Attributes	None
Maps To	

7.1.5 dc:description

Name	Description
Identifier	dc:description
Definition	An account of the content of the resource.
Comment	Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content. Use dc:description for whole-resource metadata. Abstract is also in the genre table, the abstract and the description can be the same or different. Summary (i.e. conclusion) also.
PRISM	The shortest useful name of the person or organization releasing this resource.
Example	

Model (#PCDATA)
Attributes None
Maps To

7.1.6 dc:format

Name Format
Identifier dc:format
Definition The physical or digital manifestation of the resource.
Comment Typically, Format may include the media-type or dimensions of the resource. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource. Examples of dimensions include size and duration. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).
PRISM The MIME-type of the resource. [For PRISM, I think we are only interested in the media type. Physical format info is probably not something we need to do in an interoperable manner.]
Example
Model (#PCDATA)
Attributes None
Maps To

7.1.7 dc:identifier

Name Identifier
Identifier dc:identifier
Definition An unambiguous reference to the resource within a given context.
Comment Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Example formal identification systems include the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL)), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN).
PRISM Consistent and thorough use of identifiers is essential for PRISM conformance. Value is either a URI, or a prism structured ID that is an authority, name pair of strings. Note that multiple dc:identifier statements can be used for internal IDs like ISSN, vol, num, issue, edition, accession number, etc. May be used with volume, number, and pages to identify a particular published item.
Example
Model (#PCDATA)
Attributes None
Maps To

7.1.8 dc:language

Name Language
Identifier dc:language
Definition A language of the intellectual content of the resource.
Comment Recommended best practice for the values of the Language element is defined by RFC 1766 [RFC1766] which includes a two-letter Language Code (taken from the ISO 639 standard [ISO639]), followed optionally, by a two-letter Country Code (taken from the ISO 3166 standard [ISO3166]). For example, 'en' for English, 'fr' for French, or 'en-uk' for English used in the United Kingdom.
PRISM
Example
Model (#PCDATA)
Attributes None
Maps To

7.1.9 dc:relation

Name	Relation
Identifier	dc:relation
Definition	A reference to a related resource.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.
PRISM	
Example	
Model	(#PCDATA)
Attributes	None
Maps To	
Name	Rights
Identifier	dc:rights
Definition	Information about rights held in and over the resource.
Comment	Typically, a Rights element will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the Rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.
PRISM	
Example	
Model	(#PCDATA)
Attributes	None
Maps To	

7.1.10 dc:subject

Name	Subject
Identifier	dc:subject
Definition	The topic of the content of the resource.
Comment	Typically, a Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.
PRISM	PRISM's recommended practice is to provide the value of the <dc:subject> element using the <prism:Descriptor> element and its allowed elements of <vocab>, <code>, and <label>.
Example	
Model	(#PCDATA)
Attributes	None
Maps To	

7.1.11 dc:title

Name	Title
Identifier	dc:title
Definition	A name given to the resource.
Comment	Typically, a Title will be a name by which the resource is formally known.
PRISM	The shortest useful name for this resource.
Example	
Model	(#PCDATA)
Attributes	None
Maps To	

7.1.12 dc:type

Name	Type
Identifier	dc:type
Definition	The nature or genre of the content of the resource.

Comment Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the working draft list of Dublin Core Types [DCT1]). To describe the physical or digital manifestation of the resource, use the FORMAT element. Repeat for resources with multiple types.
PRISM [PRISM needs to recommend a practice here, which would be to take values from our list of types.]
Example
Model (#PCDATA)
Attributes None
Maps To

7.1.13 prism:category

Name Category
Identifier prism:category
Definition The nature or genre of a resource's intellectual content.
Comment
Example <prism:category rdf:resource="http://prismstandard.org/1.0/category.xml#electionResults"/>
Model (#PCDATA)
Attributes
Maps To

7.2 Provenance

7.2.1 dc:publisher

Name Publisher
Identifier dc:publisher
Definition An entity responsible for making the resource available.
Comment Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.
PRISM The name of the publisher should be supplied as content, a URI used in an rdf:resource attribute or a controlled term from an authority list be used.
Example `<dc:publisher rdf:resource="http://wanderlust.com/" />`
Model `(#PCDATA)`
Attributes None
Maps To

7.2.2 dc:source

Name Source
Identifier dc:source
Definition A Reference to a resource from which the present resource is derived.
Comment The present resource may be derived from the Source resource in whole or in part. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.
PRISM
Example
Model (#PCDATA)
Attributes None
Maps To

7.2.3 prism:distributor

Name Distributor
Identifier prism:distributor

Definition An identifier for the distributor of the resource.
Comment Best practice is to use a URI for the distributor as a value for the rdf:resource attribute.
Example
Model (#PCDATA)
Attributes None
Maps To

7.2.4 prism:service

Name Service
Identifier prism:service
Definition An identifier for part of a newsfeed.
Comment Best practice is to use a URI as the value of the rdf:resource attribute.
Example
Model (#PCDATA)
Attributes None
Maps To

7.3 Timestamps

7.3.1 prism:creationTime

Name Creation Time
Identifier prism:creationTime
Definition Date and time the identified resource was first created.
Comment
Example
Model (#PCDATA)
Attributes None
Maps To

7.3.2 prism:expireTime

Name Expiration Time
Identifier prism:expireTime
Definition Date and time when the resource may no longer be distributed.
Comment
Example
Model (#PCDATA)
Attributes None
Maps To

7.3.3 prism:modifyTime

Name Last Modified
Identifier prism:modifyTime
Definition Date and time the resource was last modified.
Comment
Example
Model (#PCDATA)
Attributes None
Maps To

7.3.4 prism:publicationTime

Name Publication Time
Identifier prism:publicationTime
Definition Date and time when the resource is released to the public.
Comment

Example
Model (#PCDATA)
Attributes None
Maps To

7.3.5 prism:receivedTime

Name Received Time
Identifier prism:receivedTime
Definition Date and time when the resource was received on current system.
Comment
Example
Model (#PCDATA)
Attributes None
Maps To

7.3.6 prism:releaseTime

Name Release Time
Identifier prism:releaseTime
Definition Earliest date and time when the resource may be distributed.
Comment
Example
Model (#PCDATA)
Attributes None
Maps To

7.4 Subject Description

7.4.1 prism:subjectEvent

Name Subject Event
Identifier prism:subjectEvent
Definition An event referred to in or described by the resource.
Comment If there is more than one event related to a resource, include a separate instance of prism:SubjectEvent for each event.
Example <prism:subjectEvent></prism:subjectEvent>
Model (#PCDATA)
Attributes None
Maps To

7.4.2 prism:subjectIndustry

Name Subject Industry
Identifier prism:subjectIndustry
Definition An industry referred to in or described by the resource.
Comment If there is more than one industry related to a resource, include a separate instance of prism:subjectIndustry for each industry.
Example <prism:subjectIndustry></prism:subjectIndustry>
Model (#PCDATA)
Attributes None
Maps To

7.4.3 prism:subjectLocation

Name Subject Location
Identifier prism:subjectLocation
Definition A location referred to in or described by the resource.
Comment If there is more than one location related to a resource, include a separate instance of

prism:subjectLocation for each location.
Example <prism:subjectLocation></prism:subjectLocation>
Model (#PCDATA)
Attributes None
Maps To

7.4.4 prism:subjectOrg

Name Subject Organization
Identifier prism:subjectOrg
Definition An organization referred to in or described by the resource.
Comment If there is more than one organization related to a resource, include a separate instance of prism:subjectOrg for each organization.
Example <prism:subjectOrg></prism:subjectOrg>
Model (#PCDATA)
Attributes None
Maps To

7.4.5 prism:subjectPerson

Name Subject Person
Identifier prism:subjectPerson
Definition A person referred to in or described by the resource.
Comment If there is more than one person related to a resource, include a separate instance of prism:subjectPerson for each person.
Example <prism:subjectPerson></prism:subjectPerson>
Model (#PCDATA)
Attributes None
Maps To

7.4.6 prism:subjectURL

Name Subject URL
Identifier prism:subjectURL
Definition A URL referred to in or described by the resource (but not the URL of the resource itself).
Comment If there is more than one URL related to a resource, include a separate instance of prism:subjectURL for each URL.
Example <prism:subjectURL>http://www.yahoo.com/</prism:subjectURL>
Model (#PCDATA)
Attributes None
Maps To

7.5 Resource Relationships

7.5.1 dc:relation

Name Relation
Identifier dc:relation
Definition This element refers to a related resource.
Comment rdf:value attribute holds the identfier for the related resource. The prism:relationType sub-element defines the type of relation.
Example
Model
Attributes rdf:resource – contains the identifier for the related resource.
Maps To

7.5.2 prism:preference

Name Preference
Identifier prism:preference
Definition For resources that indicate different versions (has Alternative, hasVersion), this element specifies a preference level indicating which resource should be chosen as a substitute.
Comment 1 is the highest preference, 2 is second-highest, etc.
Example
```
<prism:hasAlternative rdf:parseType="resource'>
  <rdf:value>http://freeimages.com/PoolHut.jpg</rdf:value>
  <prism:preference>1</prism:preference>
</prism:hasAlternative>
```
Model (#PCDATA)
Attributes None
Maps To

7.5.3 prism:isPartOf

Name Is Part Of
Identifier prism:isPartOf
Definition The described resource is a physical or logical part of the referenced resource.
Comment
Example
```
<prism:isPartOf rdf:resource=
  "http://TravelMongo.com/2000/08/BelizeArticle.xml" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.4 prism:hasPart

Name Has Part
Identifier prism:hasPart
Definition The described resource includes the referenced resource either physically or logically.
Comment
Example
```
<prism:hasPart rdf:resource=
  "http://travelmongo.com/2000/08/BelizePhoto.jpg" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.5 prism:isVersionOf

Name Is Version Of
Identifier prism:isVersionOf
Definition The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
Comment For corrections, use the subproperty `prism:isCorrectionOf`. For alternative versions, use the subproperty `prism:isAlternativeFor`.
Example
```
<prism:isVersionOf rdf:resource=
  "http://travelmongo.com/2000/08/BelizeTravel.xml" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.6 prism:hasVersion

Name Has Verison
Identifier prism:hasVersion
Definition The described resource has a version, edition, or adaptation, namely, the referenced resource. Changes in version imply substantive changes in content rather than

differences in format.

Comment For corrections, use the subproperty `prism:hasCorrection`

Example
```
<prism:hasVersion rdf:resource=
  "http://travelmongo.com/2000/08/BelizeTravelUpdate.xml" />
```

Model (#EMPTY)

Attributes rdf:resource contains identifier of related resource

Maps To

7.5.7 prism:isFormatOf

Name Is Format Of

Identifier prism:isFormatOf

Definition The described resource is the same intellectual content of the referenced resource, but presented in another format.

Comment

Example
```
<prism:isFormatOf rdf:resource=
  "http://wanderlust.com/2000/08/Belize.qxd" />
```

Model (#EMPTY)

Attributes rdf:resource contains identifier of related resource

Maps To

7.5.8 prism:hasFormat

Name Has Format

Identifier prism:hasFormat

Definition The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.

Comment

Example
```
<prism:hasFormat rdf:resource=
  "http://wap.wanderlust.com/2000/08/Belize.wml" />
```

Model (#EMPTY)

Attributes rdf:resource contains identifier of related resource

Maps To

7.5.9 prism:references

Name References

Identifier prism:references

Definition The described resource references, cites, or otherwise points to the referenced resource.

Comment

Example
```
<prism:references rdf:resource=
  "http://travelbelize.com/HotelInformation.html" />
```

Model (#EMPTY)

Attributes rdf:resource contains identifier of related resource

Maps To

7.5.10 prism:isReferencedBy

Name Is Referenced By

Identifier prism:isReferencedBy

Definition The described resource is referenced, cited, or otherwise pointed to by the referenced resource. [DCMI- R]

Comment

Example

Model (#EMPTY)

Attributes rdf:resource contains identifier of related resource

Maps To

7.5.11 prism:isBasedOn

Name Is Based On

Identifier
Definition The described resource is a performance, production, derivation, translation, adaptation or interpretation of the referenced resource.
Comment
Example
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.12 prism:isBasisFor

Name Is Basis For
Identifier
Definition The described resource has a performance, production, derivation, translation, adaptation or interpretation, namely the referenced resource.
Comment
Example
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.13 prism:requires

Name Requires
Identifier prism:requires
Definition The described resource requires the referenced resource to support its function, delivery, or coherence of content.
Comment
Example
```
<prism:requires rdf:resource=
  "http://wanderlust.com/2000/08/BelizePhotoCredit.txt" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.14 prism:isRequiredBy

Name Is Required By
Identifier prism:isRequiredBy
Definition The described resource is required by the referenced resource, either physically or logically.
Comment
Example
```
<prism:isRequiredBy rdf:resource=
  "http://wanderlust.com/2000/08/BelizePhoto.jpg" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.15 prism:isAlternativeFor

Name Is Alternative For
Identifier prism:isAlternativeFor
Definition The described resource can be substituted for the referenced resource.
Comment This element is a sub-property of the `prism:isVersionOf` relation.
Example
```
<prism:isAlternativeFor rdf:resource=
  "http://freelancer.com/photos/BelizeBeach.jpg" />
```
Model (EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.16 prism:hasAlternative

Name Has Alternative
Identifier prism:has Alternative
Definition The described resource has an alternative version that can be substituted, namely the referenced resource.
Comment This element is a sub-property of the prism:hasVersion relation
Example
```
<prism:hasAlternative rdf:parseType="resource'>
  <rdf:value>http://freeimages.com/PoolHut.jpg</rdf:value>
  <prism:preference>1</prism:preference>
</prism:hasAlternative>
```
Model `(rdf:value, prism:preference)?`
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.17 prism:isCorrectionOf

Name Is Correction Of
Identifier prism:isCorrectionOf
Definition The described resource is a corrected version of the referenced resource.
Comment
Example
```
<prism:isCorrectionOf rdf:resource=
  "http://wanderlust.com/2000/08/BelizeTravel.xml" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.5.18 prism:hasCorrection

Name Has Correction
Identifier prism:hasCorrection
Definition The described resource has a correction, namely the referenced resource.
Comment
Example
```
<prism:isCorrectionOf rdf:resource=
  "http://wanderlust.com/2000/08/BelizeTravelCorrected.xml" />
```
Model (#EMPTY)
Attributes rdf:resource contains identifier of related resource
Maps To

7.6 Rights and Permisisons

7.6.1 dc:rights

Name Rights
Identifier dc:rights
Definition Element where all the rights are specified
Comment rdf:resource specifies an identifier that is unique in the document. There should then be an rdf:description about that identifier.
Example
```
<dc:rights rdf:resource="docID:imageRights" />
```
Model EMPTY
Attributes rdf:resource - Specifies document-unique ID for rights information
Maps To

7.6.2 prism:contentCopyrightHolder

Name Content Copyright Holder
Identifier prism:contentCopyrightHolder
Definition If different than the above, contact info for the copyright holder of the content of the resource.
Comment

Example see prism:provider
Model (#PCDATA)
Attributes
Maps To

7.6.3 prism:contractDate

Name Contract Date
Identifier prism:contractDate
Definition Date contract was issued
Comment W3C Profile of ISO date specification
Example
```
<prism:contractDate>20000807T13:00:00</prism:contractDate>
```
Model (#PCDATA)
Attributes
Maps To

7.6.4 prism:contractDuration

Name Contract Time
Identifier prism:contractDuration
Definition Specifies the time period under which the specified rights are valid.
Comment Can specify a start and end point in time, or a calendar interval from a point in time.
Example
```
<prism:contractDuration>
  <prism:TimeFormat
    rdf:resource="http://prismstandard.org/1.0/time.xml#range"/>
  <prism:TimeFrom>20000807T13:00:00</prism:timeFrom>
  <prism:TimeUntil>20010807T13:00:00</prism:timeUntil>
</prism:contractDuration>
```
Model (#PCDATA)
Attributes
Maps To

7.6.5 prism:copyright

Name Copyright
Identifier prism:copyright
Definition Copyright statement for the resource
Comment
Example
```
<prism:copyright>Copyright © Wicked Publication,
inc.</prism:copyright>
```
Model (#PCDATA)
Attributes
Maps To

7.6.6 prism:isCopyrighted

Name Is Copyrighted
Identifier prism:isCopyrighted
Definition A flag that specifies whether the specified resource has a copyright.
Comment This element MUST contain 'yes' or 'no'
Example
```
<prism:isCopyrighted>yes</prism:isCopyrighted>
```
Model (#PCDATA) {yes/no}
Attributes
Maps To

7.6.7 prism:isExclusive

Name Is Exclusive
Identifier prism:isExclusive
Definition Boolean flag: Are the specified rights granted for exclusive use of the resource?
Comment This element MUST contain 'yes' or 'no'

Example `<prism:isExclusive>no</prism:isExclusive>`
Model (#PCDATA)
Attributes
Maps To

7.6.8 prism:isForReuse

Name Is For Reuse
Identifier isForReuse
Definition Boolean flag: Can this resource be reused.
Comment This element MUST contain 'yes' or 'no'
Example `<prism:isForReuse>yes</prism:isForReuse>`
Model (#PCDATA)
Attributes
Maps To

7.6.9 prism:providerType

Name Provider Type
Identifier prism:providerType
Definition Describes the provider of the specified resource, such as a staff photographer, a freelancer or a media house.
Comment Specifies a value Provider Type qualifier or another controlled vocabulary
Example
```
<prism:providerType rdf:resource=
  "http://prismstandard.org/1.0/provider.xml#freelancer" />
```
Model EMPTY
Attributes rdf:resource references a controlled vocabulary term.
Maps To

7.6.10 prism:restrictions

Name Restrictions
Identifier prism:restrictions
Definition Container for rights and uses that are restricted for a resource.
Comment
Example
```
<prism:restrictions>
  <!—Do not allow use for the tobacco industry →
  <prism:use>
    <prism:usageType rdf:resource="usage:industry" />
    <prism:usage>Not for use in tobacco industry</prism:usage>
  </prism:use>
</prism:restrictions>
```
Model `prism:use+`
Attributes
Maps To

7.6.11 prism:right

Name Right
Identifier prism:right
Definition A specific right that has been granted, possibly for a specific use of a resource
Comment
Example
```
<prism:right
  rdf:resource="http://prismstandard.org/1.0/right.xml#embed"/>
```
Model (#PCDATA)
Attributes
Maps To

7.6.12 prism:rightsHolder

Name Rights Holder

Identifier prism:rightsHolder
Definition If different than the provider, contact info for the person or agency holding rights to the resource.
Comment
Example see prism:provider
Model (#PCDATA)
Attributes
Maps To

7.6.13 prism:rightsLocation

Name Rights Location
Identifier prism:rightsLocation
Definition An external location where rights are specified.
Comment This element SHOULD contain a machine-resolvable URL. The resource at this URL MUST return an RDF-Compliant document.
Example
```
<prism:rightsLocation
  rdf:resource="http://eRights.com/12345Rights.xml" />
```
Model EMPTY
Attributes rdf:resource – Specifies URL to rights information
Maps To

7.6.14 prism:usage

Name Resource Usage
Identifier prism:usage
Definition Human-readable description of a use that is allowed or restricted.
Comment
Example
```
<prism:usage>May downsample for Web use.</prism:usage>
```
Model (#PCDATA)
Attributes
Maps To

7.6.15 prism:usageType

Name Resource Usage Type
Identifier prism:usageType
Definition Specifies the type of usage.
Comment References a controlled vocabulary term
Example
```
<prism:usageType rdf:resource=
  "http://prismstandard.org/1.0/usage.xml#manipulation"/>
```
Model EMPTY
Attributes rdf:resource references a controlled vocabulary term that SHOULD be described elsewhere in the document.
Maps To

7.6.16 prism:use

Name Resource Use
Identifier prism:use
Definition Specifies a particular type of use that will be allowed or restricted
Comment
Example
```
<prism:use>
  <prism:usageType rdf:resource=
    "http://prismstandard.org/1.0/usage.xml#manipulation"/>
  <prism:usage>May downsample for Web use.</prism:usage>
<prism:use>
```
Model
```
(prism:usageType prism:usage+)
```
Attributes
Maps To

7.7 Contact Information

7.7.1 prism:contactAddress

Name Contact Address
Identifier prism:contactAddress
Definition Specifies a street address
Comment
Example
```
<prism:contactAddress>12345 Main Street
  Anytown USA 12345</prism:contactAddress>
```
Model (#PCDATA)
Attributes
Maps To

7.7.2 prism:contactEmail

Name Contact Email
Identifier prism:contactEmail
Definition An email address that can be used to contact an individual or entity.
Comment
Example
```
<prism:contactEmail>sales@imagemongo.com</prism:contactEmail>
```
Model (#PCDATA)
Attributes
Maps To

7.7.3 prism:contactFax

Name Contact Fax
Identifier prism:contactFax
Definition A fax number
Comment
Example
```
<prism:contactFax>800.555.1234</prism:contactFax>
```
Model (#PCDATA)
Attributes
Maps To

7.7.4 prism:contactName

Name Contact Name
Identifier prism:contactAddress
Definition Specifies a contact name
Comment
Example
```
<prism:contactName>Freelance, Inc.</prism:contactName>
```
Model (#PCDATA)
Attributes
Maps To

7.7.5 prism:contactPhone

Name Contact Phone
Identifier prism:contactPhone
Definition A voice telephone number.
Comment
Example
```
<prism:contactPhone>800.555.1212</prism:contactPhone>
```
Model (#PCDATA)
Attributes
Maps To

7.7.6 prism:contactURL

Name Contact URL

Identifier prism:contactURL
Definition Specifies a machine-resolvable URL that can be used to locate an individual or an entity.
Comment
Example `<prism:contactURL>http://www.photodisc.com/</prism:contactURL>`
Model (#PCDATA)
Attributes
Maps To

7.8 Points and Ranges of Time

7.8.1 prism:TimeFrom

Name Time From
Identifier prism:timeFrom
Definition Specifies a starting point in time
Comment Uses the W3C profile of the ISO time specification.
Example `<prism:TimeFrom>20000807T13:00:00</prism:timeFrom>`
Model (#PCDATA)
Attributes
Maps To

7.8.2 prism:TimeUntil

Name Time Until
Identifier prism:timeUntil
Definition Specifies an ending point in time
Comment Uses the W3C profile of the ISO time specification.
Example `<prism:TimeUntil>20010807T13:00:00</prism:timeUntil>`
Model (#PCDATA)
Attributes
Maps To

7.8.3 prism:TimeMoment

Name Time Moment
Identifier prism:timeMoment
Definition Specifies a moment in time.
Comment Uses the W3C profile of the ISO time specification.
Example `<prism:timeMoment>20000810T10:53:20</prism:timeMoment>`
Model (#PCDATA)
Attributes
Maps To
Name Time Units
Identifier prism:timeUnits
Definition Specifies which calendar unit of time will be used.
Comment References a PRISM calendar unit qualifier or other controlled vocabulary.
Example
```
<prism:timeUnits rdf:resource=
  "http://prismstandard.org/1.0/calendar.xml#years"/>
```
Model EMPTY
Attributes rdf:resource references a controlled vocabulary term for a unit of time.
Maps To

7.9 Inline Markup

PRISM is a metadata specification for the needs of the publishing industry. Metadata is typically considered as out-of-line information. Fields such as Author, Title, and Subject are stereotypical. However,

a consistent theme from the publishers in the working group was the need for inline markup of organizations, locations, product names, personal names, quotations, etc.

To meet the needs of the publishers, the PRISM specification provides the following elements that can be used for in-line markup. Note that all of these elements map to elements in the NITF DTD. However, they go beyond the current NITF DTD, by allowing references to authority files.

Developers of XML specifications for the publishing industry can use the following DTD fragment to incorporate PRISM's in-line markup elements into their DTDs. The fragment assumes that the basic textual content markup is described in another parameter entity known as `%content.mix;`

```
<!-- href contains an authority file reference -->
<!ENTITY % inlineAttrs " href CDATA  #IMPLIED">

<!ELEMENT pim:location  (%content.mix; )>
<!ATTLIST pim:location  %inlineAttrs; >
<!ELEMENT pim:objectTitle  (%content.mix; )>
<!ATTLIST pim:objectTitle  %inlineAttrs; >
<!ELEMENT pim:org  (%content.mix; )>
<!ATTLIST pim:org  %inlineAttrs; >
<!ELEMENT pim:person  (%content.mix; )>
<!ATTLIST pim:person  %inlineAttrs; >
<!ELEMENT pim:quote  (%content.mix; )>
<!ATTLIST pim:quote personRef CDATA #IMPLIED
                    placeRef CDATA #IMPLIED
                    occation CDATA #IMPLIED
                    date CDATA #IMPLED >
```

7.9.1 pim:location

Name	Location
Identifier	pim:location
Definition	The location element tags a geographical location in the text.
Comment	Even at the simplest level, the location element helps to distinguish, for example, the Scottish city “Paisley” from the fabric design, or the country “China” from the tableware.
Example	He spoke on the history of <pim:location>Great Lakes basin</pim:location> at the Royal Ontario Museum in <pim:location>Toronto</pim:location>.
Model	(%content.mix;)
Attributes	authorityReference
Maps To	

7.9.2 pim:objectTitle

Name	Object title
Identifier	pim:objectTitle
Definition	The prism:objectTitle element tags the title of an object (such as a book, song, movie, etc.) in the text.
Comment	This element allows only text as its content, so it is not possible to markup up titles within titles.
Example	Some analysts compared the recent events to the film <pim:objectTitle>Wag the Dog</pim:objectTitle>.
Model	(%content.mix;)
Attributes	authorityReference
Maps To	

7.9.3 pim:org

Name	Organization
Identifier	pim:org

Definition The org element tags the name of any organization, such as a government, department, ministry, corporation, charity, or club.
Comment
Example <pim:org>Nortel Networks <orgid idsrc="http://www.xmlnews.org/ns/orgids/tickers" value="NYSE:NT"/></pim:org> saw its stock fall in the face of the Brazilian devaluation.
Model (%content.mix;)
Attributes authorityReference, orgid
Maps To

7.9.4 pim:person

Name Person
Identifier pim:person
Definition The person element tags the name of a human individual (real or imaginary) in the text.
Comment
Example Prime Minister <pim:person>Tony Blair</pim:person> will meet with the other <pim:org>EU</pim:org> leaders to discuss agricultural policy.
Model (%content.mix;)
Attributes authorityReference
Maps To

7.9.5 pim:quote

Name Quote
Identifier pim:quote
Definition Marks the words attributed to a specific person in the text.
Comment
Example
```
<pim:quote speakerRef="USPres:JFK" placeref="city:Berlin"
occasion="Address to West Berlin" date="yyyymmdd">Ich bin ein
Berliner</pim:quote>
```
Model (%content.mix;)
Attributes `speakerRef` – authority file reference to speaker
`placeRef` – authority file reference to place
`date` – ISO date
`occasion` – Textual description of the occasion
Maps To

7.10 Defining Controlled Values

7.10.1 psv:broaderTerm

Name Broader Term
Identifier psv:broaderTerm
Definition Links to a broader (more general) concept in the vocabulary. For example, from 'dog' to 'mammal'.
Comment Note that more than one psv:broaderTerm link IS ALLOWED. This means that polyhierarchic structures are possible.
Example
Model (#PCDATA)
Attributes
Maps To

7.10.2 psv:code

Name Code
Identifier psv:code
Definition Provides a machine-readable identifier for the vocabulary and term.
Comment

Example
Model (#PCDATA)
Attributes
Maps To

7.10.3 psv:definition

Name Definition
Identifier psv:definition
Definition Provides a human-readable definition for the item in the vocabulary.
Comment
Example
Model (#PCDATA)
Attributes
Maps To

7.10.4 psv:label

Name Label
Identifier psv:label
Definition Provides a human-readable label for the term in the vocabulary.
Comment Multiple labels can be provided with different xml:lang attributes.
Example
Model (#PCDATA)
Attributes
Maps To

7.10.5 psv:narrowerTerm

Name Narrower Term
Identifier psv:narrowerTerm
Definition Links to a narrower (more specific) concept in the vocabulary. For example, from 'dog' to 'Dalmation'.
Comment Multiple NT links are allowed.
Example
Model (#PCDATA)
Attributes
Maps To

7.10.6 psv:relatedTerm

Name Related Term
Identifier psv:relatedTerm
Definition Links to a 'related term' in the vocabulary, where the nature of the relation is not specified.
Comment
Example
Model (#PCDATA)
Attributes
Maps To

7.10.7 psv:synonym

Name Synonym
Identifier psv:synonym
Definition Alternate labels (synonyms) for the same property.
Comment
Example
Model (#PCDATA)
Attributes

Maps To

7.10.8 psv:vocabulary

Name Vocabulary
Identifier psv:vocabulary
Definition Provides a human-readable string identifying the vocabulary from which the term comes.
Comment
Example
Model (#PCDATA)
Attributes
Maps To

8 PRISM Controlled Vocabularies

8.1 Resource Role Vocabularies

Keeping track of media types such as text/html or image/jpeg is sufficient for rendering software to decide how to present data. However for discovering and repurposing content, it is helpful to make other statements about the nature of a resource than its media type.

The PRISM Specification defines two controlled vocabularies to specify the nature of a resource: the Resource Type and the Resource Category. The Resource Type describes how a resource presents information in a way that is media-independent. The Resource Category element describes the intellectual content of a resource in a way that is independent from the media format and the style of presentation.

The Resource Type values form a controlled vocabulary for the <dc:type> element. The Resource Category values form a controlled vocabulary for the <prism:category> element, defined by the PRISM specification.

8.1.1 Resource Type

The Resource Type defines the way that a resource presents information. The Resource Type captures different information than the format of a resource, as specified using MIME types. For example, a JPEG could be a photo, line drawing, or chart. The rendering software does not care, but potential users of the content do. The Resource type is also not specific to its intellectual content (e.g. election results vs. death rates).

The URL for the PRISM resource type vocabulary is: http://prismstandard.org/1.0/resourcetypes.xml.

Term	Description
article	Literary compositions prepared for publication as an independent portion of a magazine, newspaper, encyclopedia, or other work. [AAT]
book	Sheets of paper, parchment, or similar material, that are blank, written on, or printed, and are strung or bound together; especially, when printed, a bound volume, or a volume of some size. [AAT]
body	The principal component. [NewsML]
calendar	A timetable of appointments, special events, etc. [Oxford Desk Dictionary]
catalog	Enumerations of items, usually arranged systematically, with descriptive details; may be in book or pamphlet form, on cards, or online. [AAT]

electronicBook[2]	A digital object typically thought of as an electronic analog to a physical hardcover or softcover book.
graph	Representations of any sort of data by means of dots, lines, or bars; usually to illustrate relationships. [AAT]
illustration	Representations or diagrams that clarify, usually accompanying a text, sometimes part of an advertisement. [AAT]
interactiveContent	Content that actively engages a person, such as crossword puzzles, financial calculators and applets.
journal	Periodicals containing scholarly articles or otherwise disseminating information on developments in scholarly fields. [AAT]
list	A series of names, words, or other items written, printed, or imagined one after the other. [dictionary.com]
magazine	Periodicals containing articles, essays, poems, or other writings by different authors, usually on a variety of topics and intended for a general reading public or treating a particular area of interest for a popular audience. [AAT]
manual	Work containing concise information, often rules or instructions needed to perform tasks or processes. [AAT]
news	A collection of news stories.
newspaper	Papers that are printed and distributed daily, weekly, or at some other regular and usually short intervals and which contain news, editorials and opinions, features, advertising, and other matter considered of general interest. [AAT]
photo	A picture of a person or scene in the form of a print or transparent slide; recorded by a camera on light-sensitive material. [WORDNET]
table	Condensed, orderly arrangements of data, especially those in which the data are arranged in columns and rows. [AAT]

8.1.2 Resource Category

The Resource Category describes expectations on the nature of the intellectual content of the resource. (e.g. obituary, election result)

The URL for the PRISM Resource Category vocabulary is: http://prismstandard.org/1.0/category.xml

Term	**Description**
abstract	A section featuring the most important points of a work. [NewsML]
advertisement	Piece of material whose presence is paid for. [NewsML]
authorBio	Brief text about the author of a work.
bibliography	A section describing lists of books or other textual materials arranged in some logical order giving brief information about the works, such as author, date, publisher, and place of publication; may be works by a particular author, or on a particular topic. [AAT]
biography	Written accounts of the lives of individuals. [AAT]
brief	Material shorter than a typical article, frequently part of a collection under a single headline.
cartoon	Pictorial images using wit to comment on such things as contemporary events, social habits, or political trends, usually executed in a broad or abbreviated manner.

[2] The PRISM Specification does not say anything about the logical structure of books, e.g. chapters, sections or the like.

	[AAT]
classifiedAd	An advertisement, usually brief, appearing in a publication under headings with others of the same category.
column	Editorial or syndicated column.
dateline	Date and location of creation.
notice	Announcements given for a specific purpose.
electionResults	The results of an election.
eventsCalendar	Describes events that are happening over a specified period of time.
feature	A prominent or special article, story, or department in a newspaper or periodical. [Dictionary.com]
financialStatement	Reports summarizing the financial condition of an organization on any date or for any period. [AAT]
index	Lists, usually in alphabetical order, of persons and/or subjects referred to in documents, with location of references thereto. [AAT]
interview	Statements, transcripts, or recordings of conversations in which one person obtains information from another such as for research purposes, publication, or broadcast. [AAT]
legalDocument	Documents having legal relevance in general. [AAT]
letterToEditor	A letter sent to the editors of a publication expressing an opinion.
logo	Graphic images that are designed for ready recognition to identify a product, company, or organization and sometimes used as trademarks, and that are symbol- or picture-based. [AAT]
map	Documents depicting, normally to scale and usually on a flat medium, a selection of material or abstract features on or in relation to the surface of the earth or of a heavenly body, and generally emphasizing arterial or regional relationships. [AAT]
obituary	Published notices of a death, usually with a brief biography of the deceased. [AAT]
opinion	An article in a publication expressing the opinion of its author.
poll	An inquiry into public opinion conducted by interviewing a random sample of people [WORDNET]
productDescription	A description of a product.
profile	An essay presenting noteworthy characteristics and achievements. Use Profile for places and organizations and Biography for individual persons.
quote	To repeat or copy the words of (another), usually with acknowledgment of the source. [dictionary.com]
recipe	Sets of directions with a list of ingredients for making or preparing something, especially food. [AAT]
review	
sidebar	Component associated with an article, that typically presents additional, contrasting, or late-breaking news. [AAT]
tableOfContents	A list of the work's parts in sequence, usually with a page number or other symbol indicating where each part begins. [AAT]

8.2 Rights Property Values

These terms are the subset of terms from XrML [XRML] pertinent for reuse, and serve as values for the `prism:right` element.

The URL for the PRISM rights property values is: http://prismstandard.org/1.0/right.xml.

Term	Description

edit	Allow the modification of a work.Grant right to modify a work.
extract	Allow removing a portion of a digital work, creating a new work. Differs from edit in that it does not grant the right to modify a work except by removing parts of it.
embed	Allow including a work as part of a composite work.

8.3 Usage Property Values

These terms describe how a resource may or may not be used and are values for the `prism:usageType` element.

The URL for PRISM usage property values is: http://prismstandard.org/1.0/usage.xml

Term	Description
geography	In what geographic areas a resource can be used. Best practice: use a controlled vocabulary such as ISO country codes.
time	During what periods of time a resource will be used. Points to description of timespan?
industry	In what industry domain a resource can be used. E.g. tobacco/technology industry. Best practice – a controlled vocabulary such as SIC codes.
format	In what medium an object will be used. On the Web, in a magazine, etc. Usage: Text
manipulation	What is going to be done to the content. Downsampled? Resized? Cropped?
circulation	How large an audience is expected to see this object.

8.4 Provider Property Values

These values describe how was this resource provided and are values for the `prism:providerType` element.

The URL for the Provider property values is: http://prismstandard.org/1.0/provider.xml

Term	Description
internal	Internal archive/staff writer or photographer.
mediaHouse	From a media house that aggregates and sells content
freelancer	From a freelance writer/photographer/etc.

9 Appendices

9.1 Metadata Definitions

The succeeding chapters, which define PRISM metadata elements, use a set of ten attributes from the ISO/IEC 11179 [ISO11179] standard for the description of data elements: .

Attribute	Definition
Name	The label assigned to the data element
Identifier	The unique identifier assigned to the data element
Version	The version of the data element
Registration Authority	The entity authorized to register the data element
Language	The language in which the data element is specified
Definition	A statement that clearly represents the concept and essential nature of the

	data element
Obligation	Indicates if the data element is required to always or sometimes be present (contain a value)
Datatype	Indicates the type of data that can be represented in the value of the data element
Maximum Occurrence	Indicates any limit to the repeatability of the data element
Comment	A remark concerning the application of the data element
Maps To	Lists equivalent elements in other namespaces

Fortunately, four of the above ten attributes (Version, Registration Authority, Language, and Obligation) are constant for all elements in the PRISM namespace. Those values are listed here so that they don't have to be repeated for each element definition in the chapters that follow:

Version	1.0
Registration Authority	IDEAlliance PRISM Initiative
Language	EN
Obligation	Optional

Two of the above ten attributes (Datatype, and Maximum Occurrence) default to the following values if they are not explicitly defined for an element:

Datatype	Character String
Maximum Occurrence	Unlimited

In addition to the Name, Identifier, Definition, and Comment attributes for each element, the descriptions in the succeeding chapters include supplementary descriptive fields: A PRISM field for comments about additional restrictions imposed on the element by PRISM compliant systems, a usage example, the containment model, and a list of XML attributes (if any) for the element.

9.2 Acknowledgments

A number of sections were drawn from the XMLNews tutorials and specifications. The editor thanks David Megginson for his permission to use that material.

The following people also contributed to the PRISM effort: (To be completed.)

9.3 Future Directions

- Possible adoption of NewsML for its transport mechanism and citing controlled vocabulary terms.
- Reference implementation and API.
- Implemetation cookbook.

10 References

[AAT] Getty Art and Architecture Thesarus. <http://shiva.pub.getty.edu/aat_browser/>

[DCMI] Dublin Core Metadata Element Set, Version 1.1: Reference Description.
http://purl.org/dc/documents/rec-dces-19990702.htm

[DCMI- R] Dublin Core Relations. 2000-07-11.
<http://purl.oclc.org/dc/documents/wd-relation-current.htm>

[ICE] The Information and Content Exchange (ICE) Protocol.
http://www.w3.org/TR/Note-ice-19981026

[IETF-XML-Media] IETF Draft: XML Media Types.
http://www.ietf.org/internet-drafts/draft-murata-xml-07.txt

[IPTC-NEWSML] International Press and Telecommunications Council, NewsML Version 1.0 Beta.
http://www.iptc.org/NewsML/NewsMLv1.0-Beta-rev3.pdf.

[IPTC-NITF] International Press and Telecommunications Council, News Industry Text Format.
http://www.nitf.org/html/tech-nitf.html

[ISO-639] ISO-639: Code for the representation of names of languages, 1988 et seq.
<http://www.ics.uci.edu/pub/ietf/http/related/iso639.txt>

[ISO-639] ISO 639 - Codes for the representation of names of languages.
<http://www.oasis-open.org/cover/iso639a.html>

[ISO-3166] ISO 3166 - Codes for the representation of names of countries.
<http://www.oasis-open.org/cover/country3166.html>

[ISO-8601] ISO (International Organization for Standardization), ISO 8601:1988 (E)
<http://www.iso.ch/cate/d15903.html> Data elements and interchange formats - Information interchange - Representation of dates and times, 1998. See also "The Time Service Department of the US Naval Observatory, International Time Scales" http://tycho.usno.navy.mil/bipm.html. The following provide discussions of ISO-8601: http://www.cl.cam.ac.uk/~mgk25/iso-time.html, http://ourworld.compuserve.com/homepages/dstrange/y2k.htm, http://www.jat.org/jtt/datetime.html, http://www.w3.org/TR/NOTE-datetime

[IETF-MIMETYPES] Internet Media Types.
<http://www.isi.edu/in-notes/iana/assignments/media-types/media-types>

[NOTE-DRP] Arthur van Hoff, John Giannandrea, Mark Hapner, Steve Carter, Milo Medin, The HTTP Distribution and Replication Protocol http://www.w3.org/TR/NOTE-drp

[OG-UUID] The Open Group, Universal Unique Identifier Format
http://www.opengroup.org/onlinepubs/9629399/apdxa.htm

[P3P-Arch] Joseph Reagle, Martin Presler-Martin, Melissa Dunn, Philip DesAutels, Lorrie Cranor, Mark Ackerman, General Overview of P3P Architecture. http://www.w3.org/TR/WD-P3P-arch.html

[PGP] Pretty Good Privacy. http://www.pgp.com/

[RFC-959] J. Postel, J. Reynolds, File Transfer Protocol. http://www.ietf.org/rfc/rfc0959.txt

[RFC-1766] H. Alvestrand. March 1995, Tags for the Identification of Languages.
http://www.ietf.org/rfc/rfc1766.txt

[RFC-1808] R. Fielding, Relative Uniform Resource Locators http://www.ietf.org/rfc/rfc1808.txt

[RFC-1738] T. Berners-Lee, L. Masinter, M. McCahill, Uniform Resource Locators (URL)
http://www.ietf.org/rfc/rfc1738.txt

[RFC-1766] Tags for the Identification of Languages, Internet RFC 1766.
http://www.ietf.org/rfc/rfc1766.txt

[RFC-1945] T. Berners-Lee, R. Fielding, H. Frystyk, Hypertext Transfer Protocol - HTTP/1.0 http://www.ietf.org/rfc/rfc1945.txt

[RFC-2045] N. Freed & N. Borenstein. November 1996, Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies. http://www.ietf.org/rfc/rfc2045.txt

[RFC-2046] N. Freed & N. Borenstein. November 1996, Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types. http://www.ietf.org/rfc/rfc2046.txt

[RFC-2119] S. Bradner, Key words for use in RFCs to Indicate Requirement Level http://www.ietf.org/rfc/rfc2119.txt

[RFC-2183] R. Troost, S. Dorner, K. Moore. Communicating Presentation Information in Internet Messages: The Content-Disposition Header Field. http://www.ietf.org/rfc/rfc2183.txt

[RFC-2311] S/MIME Version 2 message specification. http://www.ietf.org/rfc/rfc2311.txt

[RFC-2387] The MIME Multipart/Related Content Type. http://www.ietf.org/rfc/rfc2387.txt

[RFC-2392] Content-ID and Message-ID Uniform Resource Locators. http://www.ietf.org/rfc/rfc2392.txt?number=2392

[RFC-2396] Uniform Resource Identifiers (URI): Generic Syntax, Internet RFC 2396. http://www.ietf.org/rfc/rfc2396.txt

[RFC-2413] Dublin Core Metadata for Resource Discovery. Internet RFC 2413. http://www.ietf.org/rfc/rfc2413.txt

[SSL] Secure Sockets Layer (SSL) Version 2.0 Specification. http://sitesearch.netscape.com/eng/security/SSL_2.html

[TGN] Getty Thesaurus of Geographic Names. http://shiva.pub.getty.edu/tgn_browser/

[WebDAV] Jim Whitehead, D. Jensen, S. Carter, Y. Goland, A. Faizi, S. Carter, D. Jensen, HTTP Extensions for Distributed Authoring -- WEBDAV. http://www.ietf.org/rfc/rfc2518.txt

[W3C-DTF] Date and Time Formats, W3C Note. http://www.w3.org/TR/NOTE-datetime

[W3C-InfoSet] XML Information Set Working Draft, http://www.w3.org/TR/xml-infoset

[W3C-NOTE-datetime] Misha Wolf, Charles Wicksteed, Date and Time Formats http://www.w3.org/TR/NOTE-datetime-970915.html

[W3C-RDF] Ora Lassila, Ralph R Swick, Resource Definition Framework (RDF) Model and Syntax Specification. http://www.w3.org/TR/REC-rdf-syntax

[W3C-smil] Synchronized Multimedia Integration Language (SMIL) 1.0 Specification (SMIL) http://www.w3.org/TR/Rec-SMIL

[W3C-xml] Tim Bray, Jean Paoli, C. M. Sperberg-McQueen, Extensible Markup Language (XML) http://www.w3.org/TR/REC-xml

[W3C-XML-NS] Tim Bray, Dave Hollander, Andrew Layman; Namespaces in XML. http://www.w3.org/TR/REC-xml-names

[XrML] ContentGuard, inc., Extensible Rights Markup Language. http://www.xrml.org/

PRISM Working Group
IDEAlliance
Graphic Communications Association
100 Daingerfield Road
Alexandria, VA 22314-2888
Phone: +1 703-519-8191
Fax: +1 703-548-2867
www.idealliance.org/PRISM