



XACML Intellectual Property Control (IPC) Profile Version 1.0

Committee Specification Draft 03

17 May 2012

Specification URIs

This version:

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csd03/xacml-3.0-ipc-v1.0-csd03-en.doc> (Authoritative)

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csd03/xacml-3.0-ipc-v1.0-csd03-en.html>

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csd03/xacml-3.0-ipc-v1.0-csd03-en.pdf>

Previous version:

<http://docs.oasis-open.org/xacml/3.0/ipc/xacml-3.0-ipc-v1-spec-cs-01-en.doc> (Authoritative)

<http://docs.oasis-open.org/xacml/3.0/ipc/xacml-3.0-ipc-v1-spec-cs-01-en.html>

<http://docs.oasis-open.org/xacml/3.0/ipc/xacml-3.0-ipc-v1-spec-cs-01-en.pdf>

Latest version:

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/xacml-3.0-ipc-v1.0-en.doc> (Authoritative)

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/xacml-3.0-ipc-v1.0-en.html>

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/xacml-3.0-ipc-v1.0-en.pdf>

Technical Committee:

OASIS eXtensible Access Control Markup Language (XACML) TC

Chairs:

Bill Parducci (bill@parducci.net), Individual

Hal Lockhart (hal.lockhart@oracle.com), Oracle

Editors:

John Tolbert (john.w.tolbert@boeing.com), The Boeing Company

Crystal Hayes (crystal.l.hayes@boeing.com), The Boeing Company

Richard Hill (richard.c.hill@boeing.com), The Boeing Company

Paul Tyson (ptyson@bellhelicopter.textron.com), Bell Helicopter Textron

Andy Han (andy.han@nextlabs.com), Nextlabs Inc.

Danny Thorpe (danny.thorpe@quest.com), Quest Software

Remon Sinnema (remon.sinnema@emc.com), EMC

Erik Rissanen (erik@axiomatics.com), Axiomatics

David Brossard (david.brossard@axiomatics.com), Axiomatics

Related work:

This specification is related to:

- *eXtensible Access Control Markup Language (XACML) Version 3.0*. Latest version.
<http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-en.html>.

Abstract:

This specification defines a profile for the use of XACML in expressing policies for intellectual property control (IPC). It defines standard attribute identifiers useful in such policies, and recommends attribute value ranges for certain attributes.

Status:

This document was last revised or approved by the eXtensible Access Control Markup Language (XACML) TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document.

Technical Committee members should send comments on this specification to the Technical Committee’s email list. Others should send comments to the Technical Committee by using the “[Send A Comment](#)” button on the Technical Committee’s web page at <http://www.oasis-open.org/committees/xacml/>.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the Technical Committee web page (<http://www.oasis-open.org/committees/xacml/ipr.php>).

Citation format:

When referencing this specification the following citation format should be used:

[xacml-ipc-v1.0]

XACML Intellectual Property Control (IPC) Profile Version 1.0. 17 May 2012. OASIS Committee Specification Draft 03.

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csd03/xacml-3.0-ipc-v1.0-csd03-en.html>.

Notices

Copyright © OASIS Open 2012. All Rights Reserved.

All capitalized terms in the following text have the meanings assigned to them in the OASIS Intellectual Property Rights Policy (the "OASIS IPR Policy"). The full [Policy](#) may be found at the OASIS website.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to OASIS, except as needed for the purpose of developing any document or deliverable produced by an OASIS Technical Committee (in which case the rules applicable to copyrights, as set forth in the OASIS IPR Policy, must be followed) or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by OASIS or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

OASIS requests that any OASIS Party or any other party that believes it has patent claims that would necessarily be infringed by implementations of this OASIS Committee Specification or OASIS Standard, to notify OASIS TC Administrator and provide an indication of its willingness to grant patent licenses to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification.

OASIS invites any party to contact the OASIS TC Administrator if it is aware of a claim of ownership of any patent claims that would necessarily be infringed by implementations of this specification by a patent holder that is not willing to provide a license to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification. OASIS may include such claims on its website, but disclaims any obligation to do so.

OASIS takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; neither does it represent that it has made any effort to identify any such rights. Information on OASIS' procedures with respect to rights in any document or deliverable produced by an OASIS Technical Committee can be found on the OASIS website. Copies of claims of rights made available for publication and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this OASIS Committee Specification or OASIS Standard, can be obtained from the OASIS TC Administrator. OASIS makes no representation that any information or list of intellectual property rights will at any time be complete, or that any claims in such list are, in fact, Essential Claims.

The name "OASIS" is a trademark of [OASIS](#), the owner and developer of this specification, and should be used only to refer to the organization and its official outputs. OASIS welcomes reference to, and implementation and use of, specifications, while reserving the right to enforce its marks against misleading uses. Please see <http://www.oasis-open.org/policies-guidelines/trademark> for above guidance.

Table of Contents

1	Introduction	6
1.1	Glossary	7
1.2	Terminology	9
1.3	Normative References	9
1.4	Non-Normative References	9
1.5	Scope	9
1.6	Use cases	9
1.7	Disclaimer	11
2	Profile	12
2.1	Resource Attributes	12
2.1.1	Copyright	12
2.1.2	Patent	12
2.1.3	Proprietary	12
2.1.4	Public-Domain	12
2.1.5	Trademark	12
2.1.6	IP-Owner	12
2.1.7	IP-Designee	13
2.1.8	Agreement-Type	13
2.1.9	Agreement-Id	13
2.1.10	Effective-Date	13
2.1.11	Expiration-Date	14
2.2	Subject Attributes	14
2.2.1	Organization	14
2.2.2	Organization-Type	14
2.2.3	Organizational-Relationship	14
2.2.4	Affiliation-Type	15
2.2.5	Agreement-Id	15
2.3	Obligations	15
2.3.1	Encrypt	15
2.3.2	Marking	16
3	Identifiers	17
3.1	Profile Identifier	17
4	Examples (non-normative)	18
4.1	Copyright	18
4.1.1	Copyright Request	18
4.1.2	Copyright Policy	19
4.2	Trademark	22
4.2.1	Trademark Request	22
4.2.2	Trademark Policy	23
4.3	Proprietary	25
4.3.1	Proprietary Request	25
4.3.2	Proprietary Policy	26
5	Conformance	30

5.1 Attribute Identifiers	30
5.2 Attribute Values	31
Appendix A. Acknowledgements	32
Appendix B. Non-Normative Text	34
Appendix C. Revision History	35

1 Introduction

{Non-normative}

This specification defines a profile for the use of the OASIS eXtensible Access Control Markup Language (XACML) [XACML3] to write and enforce policies for the purpose of providing access control for resources deemed intellectual property (hereinafter referred to as IP). Use of this profile requires no changes or extensions to the [XACML3] standard.

This specification begins with a non-normative discussion of the topics and terms of interest in this profile. The normative section of the specification describes the attributes defined by this profile and provides recommended usage patterns for attribute values.

This specification assumes the reader is somewhat familiar with XACML. A brief overview sufficient to understand these examples is available in [XACMLIntro].

For our purposes, IP may be defined as legal property rights over mental creations. IP owners can receive exclusive rights to their creations, if certain conditions are met. These exclusive rights can be exploited by the owner for profit, either directly through sales of products, or indirectly through licensing.

IP is an asset; perhaps the most valuable asset an organization has. IP can be licensed to other organizations in cases of outsourcing and/or to generate revenue from IP sharing arrangements.

IP value tends to increase when properly protected, though there are differing points of diminishing returns. IP protection doesn't guarantee security; it just provides a compensation mechanism for cases of unlawful exploitation. IP valuation and protection are often criteria for venture capital investors.

Broadly speaking, there are four main categories of intellectual property: copyrights, trademarks, trade secrets, and patents. Copyrights confer time-limited exclusive rights of ownership and/or use to the creator of the work. A copyright is typically used to protect artistic works such as photographs, music, books, etc. Copyrights are internationally recognized, though there are differences in the terms and enforcement. When copyright protection and status ends, resources are said to become public domain.

Trademarks are the IP protection scheme of names, logos, symbols, products, etc. For example, in the U.S. there are 2 main types:

- For general usage, or for not-yet-registered trademarks ™
- For trademarks registered with the USPTO ®

Trademarks are also internationally recognized through the Madrid system, which requires registration through the World Intellectual Property Organization (WIPO), a United Nations agency. The World Trade Organization also sets legal minimum standards for IP protection among member nations.

Patents are property rights granted to an inventor to prevent others from profiting from the invention for a limited time in exchange for public disclosure of the invention when the patent is granted. Patents apply to processes, machines, articles of manufacture, or composition of matter (including biological), or derived innovations. Patents require detailed disclosure of information, designs, processes, etc. Patents are administered in U.S. by the USPTO, and are internationally recognized by WTO TRIPS, WIPO, and European Patent Convention. When patent protection and status ends, resources are said to become public domain.

Trade secrets are IP protection of formulae, processes, designs, information, etc. that are not easily obtainable that a business uses for competitive advantage. They are often protected by legal contracts such as non-disclosure agreements, non-compete agreements, or proprietary information agreements. Trade secrets are the most common form of industrial IP protection, and outnumber patents. However, trade secrets are most often categorized as "proprietary" information, and may not be discovered as trade secrets unless litigated. They are not federally protected in the U.S., though most states have adopted the Uniform Trade Secrets Act. However, theft of trade secrets is prohibited by U.S. Economic Espionage Act of 1996. Trade secret status requires less disclosure than patents. Trade secrets are well protected by European Patent Convention as "know how". No international treaties protect trade secrets, though WTO TRIPS, GATT, and NAFTA have provisions for trade secret protection.

Other IP related concepts, such as **public domain and proprietary** will be defined in the glossary section.

The attributes and glossary terms defined below are not an exclusive or comprehensive list of all the attributes that may be required for rendering authorization decisions concerning IP. For example, PDPs would have to evaluate other entitlements, such as group membership, from PIPs (Policy Information Points). This profile is meant as a point of reference for implementing IP controls, and may be extended as needed for organizational purposes. Software vendors who choose to implement this profile should take the attributes herein as a framework for IP controls, but allow individual implementers some flexibility in constructing their own XACML-based authorization policies and PDPs.

Organizations not only create and use intellectual property, but they also often grant rights and/or license their IP to other organizations for a variety of reasons. Companies often license copyrighted, patented, and proprietary information to sub-contractors to provide goods or services in return. The information may be exchanged under several types of legal agreements, e.g., proprietary information agreements or patent grants. Also, organizations may grant the use of their trademarks to other businesses or non-profit institutions via trademark grants. These legal documents which grant rights to IP resources to others generally require that the licensed IP is protected. Thus, the agreements form the basis of access control policies, which can be expressed in XACML.

The goals of this profile are to create a framework of common IP-related attributes upon which authorization decisions can be rendered, and to promote federated authorization for access to IP resources. This profile will also provide XACML software developers and access control policy authors guidance on supporting IP use cases.

1.1 Glossary

Affiliation type

The type of organization to which a subject may belong. This profile lists a number of common affiliation types, including customer, supplier, partner, non-profit, government, primary contractor, sub-contractor, joint development, and authorized sub-licensor. In cases of joint development, organizations should agree on which resources were developed and by whom prior to the execution of the agreement (background IP), and determine rights and ownership of resources developed as a result of the agreement (foreground IP). The authorized sub-licensor value denotes organizations that have rights to sub-license resources that are granted by the IP-Owner.

Agreement identifier

A name, number, or other alphanumeric designator for referencing legal agreements which grant IP access.

Agreement type

The type of legal agreement which grants access to IP resources. Language granting rights to IP resources can be embedded in a number of different types of agreements. This profile includes URNs for the most common types: non-disclosure agreements, proprietary information agreements, technical data grants, patent grants, trademark grants, cross-licensing grants, and royalty-bearing.

Copyright

A form of limited and temporary government-granted monopoly which gives the creator of an original work some rights for a certain time period in relation to that work, including its publication, distribution and adaptation; after which time the work is said to enter the public domain. Copyright applies to concrete expressions of information, but not the information itself.

Covered resource

A resource that is named, described, or implied in an IP agreement as being covered or included in the terms of the agreement.

Covered subject

A subject that is named, described, or implied in an IP agreement as being covered or included in the terms of the agreement. (For example, a person who has an organizational affiliation with a party to an agreement might be a covered subject of the agreement.)

Effective date

The date on which an intellectual property license takes effect, thereby implying access for authorized purposes.

Expiration date

The date on which an intellectual property license expires, thereby terminating access.

IP-Designee

A person or entity that has been designated (directly or indirectly) by the IP-Owner to have certain rights to a particular IP resource.

IP-Owner

A designation for the person or entity that owns the intellectual property.

Marking

A visual indicator added to physical instances of intellectual property assets that provides policy and/or procedural guidance.

Organization

A company or other legal entity of which a person can be an employee or agent.

Organizational-Relationship

The organizational relationship of the subject's organization (identified by the `organization` attribute) to the organization that owns the IP resource. Examples include "employee" and "contractor".

Organization-Type

The type of organization referenced in Organization, which can include "commercial", "non-profit", and "government". Other types could be created and used as needed.

Patent

A set of exclusive rights granted by a government to an inventor or his/her assignee for a limited period of time in exchange for a disclosure of an invention.

Proprietary

Information developed by an organization for competitive advantage. "Proprietary" is used synonymously with "trade secret". For this reason, this profile identifies trade secrets and related terms such as confidential as "proprietary".

Public domain

Information that has been demoted from copyright, trademark, trade secret, or patented status. No intellectual property controls are usually necessary for items considered public domain.

Third-party proprietary

Intellectual property which has been legally entrusted to the care and use of another organization. To promote clarity, this profile utilizes the "Proprietary" resource attribute in conjunction with the "IP-Owner" resource attribute to express this concept.

Trademark

A distinctive sign or indicator used by an individual, business organization, or other legal entity to identify that the products and/or services to consumers with which the trademark appears originate from a unique source of origin, and to distinguish its products or services from those of other entities.

Trade secret

A formula, practice, process, design, instrument, pattern, or compilation of information which is not generally known or reasonably ascertainable, by which a business can obtain an economic advantage over competitors or customers. In some jurisdictions, such secrets are designated as "confidential", "limited distribution", or "restricted". Used synonymously with "Proprietary".

1.2 Terminology

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 [RFC2119].

1.3 Normative References

- [RFC2119] S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*, <http://www.ietf.org/rfc/rfc2119.txt>, IETF RFC 2119, March 1997.
- [XACML3] OASIS Standard, "eXtensible Access Control Markup Language (XACML) Version 3.0", April 2010. <http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-en.doc>
- [XACML2] OASIS Standard, "eXtensible Access Control Markup Language (XACML) Version 2.0", February 2005. http://docs.oasis-open.org/xacml/2.0/access_control-xacml-2.0-core-spec-os.pdf
- [XACML1] OASIS Standard, "eXtensible Access Control Markup Language (XACML) Version 1.0", February 2003. <http://www.oasis-open.org/committees/download.php/2406/oasis-xacml-1.0.pdf>

1.4 Non-Normative References

- [XACMLIntro] OASIS XACML TC, *A Brief Introduction to XACML*, 14 March 2003, http://www.oasis-open.org/committees/download.php/2713/Brief_Introduction_to_XACML.html
- [ISO3166] ISO 3166 Maintenance agency (ISO 3166/MA), http://www.iso.org/iso/country_codes.htm
- [DublinCore] Dublin Core Metadata Element Set, version 1.1. <http://dublincore.org/documents/dces/>

1.5 Scope

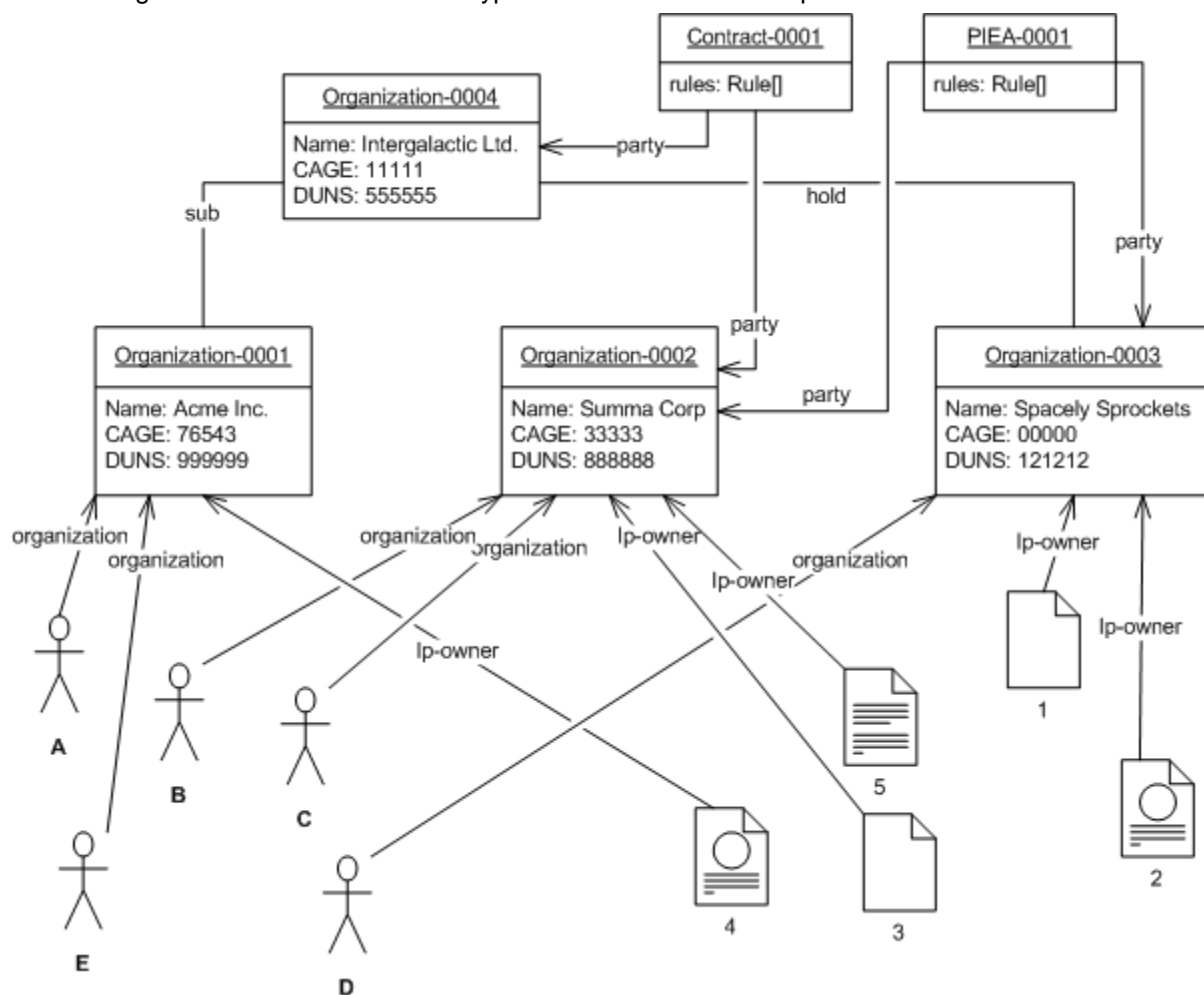
Many intellectual property access control decisions can be made on the basis of the resource's **copyright**, **trademark**, **patent**, **proprietary (trade secret)**, or other classification. This profile defines standard XACML attributes for these properties, and recommends the use of standardized attribute values.

In practice, an organization's intellectual property protection policies will be a mixture of rules derived from legal agreements, along with enterprise-specific policies and government regulations.

1.6 Use cases

PDPs (Policy Decision Points) may need to consider intellectual property protection schemes when evaluating authorization decisions. This profile is designed to provide a framework of additional <Attributes> for such decisions.

186 Refer to Figure 1 for an illustration of a typical scenario in which IP protection is a concern.



187
 188 *Figure 1 Typical IP scenario (Organization names, CAGE [five position code that identifies contractors doing*
 189 *business with the United States Government, NATO member nations, and other foreign governments.],*
 190 *and DUNS [a system developed and regulated by Dun & Bradstreet (D&B), that assigns a unique numeric*
 191 *identifier, referred to as a "DUNS number" to a single business entity.] are fictional.)*

192 From Figure 1, the questions arise: which of people A-E can see which of documents 1-5? The goal of
 193 this profile is to support the creation of interoperable XACML policies that permit and deny access as
 194 intended by the prevailing business rules. One such rule might be: "If the subject's organization
 195 matches the resource's IP-Owner, then Permit." Another might be "If the subject and resource are
 196 covered by the same agreement-identifier, then Permit."

197 The conditions that determine IP access include properties and relationships of entities remotely related
 198 to the subjects and resources involved in an IP transaction. XACML relies on data-valued attributes
 199 directly attached to subjects and resource. Therefore, the complex object structure representing the real
 200 world must be condensed to data values of attributes in the XACML categories. For example, a XACML
 201 request context for subject A might have organization="999999" and agreement-
 202 identifier="Contract-0001". In this case, one particular attribute of the organization object
 203 representing "Acme Inc." has been selected to fill the XACML IP subject:organization attribute
 204 value. The multiple object relationships from person A to Contract-0001 have been telescoped into the
 205 single string value, "Contract-0001", of the subject:agreement-identifier attribute. This
 206 "flattening" process is somewhat arbitrary; however, it must not introduce ambiguity, and may be
 207 influenced by performance or implementation considerations. Some of the attributes specified in this
 208 profile represent some such flattening process, and assume the existence of some types of remote
 209 objects that may not be represented directly in an XACML context.

210 **1.7 Disclaimer**

211 NOTHING IN THIS PROFILE IS INTENDED TO BE A LEGALLY CORRECT INTERPRETATION OR
212 APPLICATION OF U.S. OR ANY GOVERNMENT INTELLECTUAL PROPERTY LAWS OR
213 REGULATIONS. USE OF THIS PROFILE IN AN ACCESS CONTROL SYSTEM DOES NOT
214 CONSTITUTE COMPLIANCE WITH ANY INTELLECTUAL PROPERTY PROTECTION
215 REQUIREMENTS, REGULATIONS, OR RESTRICTIONS. THIS PROFILE HAS NOT BEEN REVIEWED
216 OR ENDORSED BY THE U.S. OR ANY OTHER GOVERNMENT AGENCIES RESPONSIBLE FOR
217 ENFORCING INTELLECTUAL PROPERTY LAWS, NOR BY ANY LEGAL EXPERT IN THIS FIELD.
218 Organizations that use this profile should ensure their intellectual property protection by engaging
219 qualified professional legal services.

2 Profile

2.1 Resource Attributes

Information objects may contain more than one type of intellectual property. Therefore, it is possible that information objects may have more than one IP type categorization: copyright, patent, proprietary, public domain, or trademark. In cases where information objects have more than one true value for the IP type resource attributes, policy authors may utilize policies and policy sets with the appropriate combining algorithms to determine which policies take precedence in the evaluation process. A table listing IP type categorization overlaps is provided in Appendix B.

2.1.1 Copyright

The Copyright value shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:copyright
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#boolean>. This attribute denotes whether the resource is designated as the intellectual property type “copyright”.

2.1.2 Patent

The Patent value shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:patent
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#boolean>. This attribute denotes whether the resource is designated as the intellectual property type “patent”.

2.1.3 Proprietary

The Proprietary value shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#boolean>. This attribute denotes whether the resource is designated as the intellectual property type “proprietary”.

2.1.4 Public-Domain

The Public-Domain value shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:public-domain
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#boolean>. This attribute denotes whether the resource is designated as the intellectual property type “public domain”.

2.1.5 Trademark

The Trademark value shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#boolean>. This attribute denotes whether the resource is designated as the intellectual property type “trademark”.

2.1.6 IP-Owner

IP-Owner classification values shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner
```

256 The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#string>. This attribute
257 names the owner of the IP. A common scheme such as DUNS SHOULD be used to promote
258 interoperability. The range of values for this attribute SHOULD be similar to that of the IP-Designee and
259 Organization resource attributes.

260 2.1.7 IP-Designee

261 IP-Designee classification values shall be designated with the following attribute identifier:

262 `urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee`

263 The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#string>. This attribute
264 names the designated custodian of the IP. A common scheme such as DUNS SHOULD be used to
265 promote interoperability. The range of values for this attribute SHOULD be similar to that of the IP-Owner
266 and Organization resource attributes.

267 2.1.8 Agreement-Type

268 Agreement-Type classification values shall be designated with the following attribute identifier:

269 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type`

270 The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#anyURI>.

271 This attribute can be used to indicate whether or not a specific resource is governed by a particular
272 license arrangement.

273 The range of URN values of this attribute SHALL be

274 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:non-`
275 `disclosure-agreement`
276 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:proprietary-`
277 `information-agreement`
278 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-`
279 `data-grant`
280 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-`
281 `grant`
282 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:patent-grant`
283 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:trademark-`
284 `grant`
285 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:cross-`
286 `licensing-grant`
287 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:royalty-`
288 `bearing`

289 2.1.9 Agreement-Id

290 The business document representing the IP agreement that covers this resource shall be designated with
291 the following attribute identifier.

292 `urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id`

293 The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#string>.

294 One scenario in which this attribute can be used is in the case where one or more resource documents
295 are *tagged* with metadata associated with the resource and one such tag represents the agreement id. In
296 this scenario it is assumed that there is only one agreement that covers those resources. An alternative
297 scenario is to let the policy determine the appropriate agreement associated with the resource
298 authorization request. In this alternative scenario the resource agreement-id attribute would not be used
299 in the XACML request.

300 2.1.10 Effective-Date

301 Effective-date values shall be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date`

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#date>.

This attribute can be used to indicate the date and time in which an intellectual property license takes effect, thereby implying access for authorized purposes. This attribute may also convey the date and time in which other resource attributes become valid; for example, when a copyright or patent is granted.

2.1.11 Expiration-Date

Expiration-date values shall be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date`

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#date>.

The date and time in which an intellectual property license expires, thereby terminating access. This attribute may also convey the date and time in which other resource attribute elements are no longer valid; for example, when a copyright or patent expires.

2.2 Subject Attributes

2.2.1 Organization

Organization classification values shall be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:subject:organization`

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#string>.

Organization shall denote the organization with which the subject in the request is affiliated. More specifically, this attribute should denote the organization or organizations that have a controlling interest in the subject's intellectual property rights and responsibilities with respect to the current request. A common scheme such as DUNS SHOULD be used to promote interoperability. Whichever range of values is chosen, it should coincide with the range of IP-Owner and IP-Designee.

2.2.2 Organization-Type

The type of the subject's organization (designated by the `organization` attribute), for the purpose of intellectual property rights, SHALL be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type`

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#anyURI>.

Recommended URN values for this attribute are:

`urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type:commercial`
`urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type:non-profit`
`urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type:government`

This profile does not specify how to interpret the meaning of multiple values of `organization-type` in a request context containing multiple values of `organization`.

2.2.3 Organizational-Relationship

The organizational relationship of the subject's organization (identified by the `organization` attribute) to the organization that owns the resource (identified by the `ip-owner` attribute) SHALL be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-relationship`

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#anyURI>.

Recommended URN values for this attribute are:

```
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:customer  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:supplier  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:partner  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:primary-contractor  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:subcontractor  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
relationship:authorized-sublicensor
```

This profile does not specify how to interpret the meaning of multiple values of `organizational-relationship` in a request context containing multiple values of `organization` or `ip-owner`.

2.2.4 Affiliation-Type

This attribute identifies the type of affiliation that the subject of the request has with the organization identified by the `organization` attribute. Affiliation-Type classification values shall be designated with the following attribute identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#anyURI>.

Implementors can create sub-categories of `affiliation-type` to represent roles or functions within their organizations. Some recommended values of the attribute SHALL be

```
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type:employee  
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type:contractor
```

A request context may contain multiple values for this attribute; however, this profile does not specify how to interpret the meaning of multiple values of `affiliation-type` in a request context containing multiple values of `organization`.

2.2.5 Agreement-Id

The business document representing the IP agreement that covers this subject shall be designated with the following attribute identifier.

```
urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id
```

The `DataType` of this attribute is <http://www.w3.org/2001/XMLSchema#string>.

2.3 Obligations

The `<Obligation>` element will be used in the XACML response to notify requestor that additional processing requirements are needed. This profile focuses on the use of obligations to encryption and visual marking. The XACML response may contain one or more obligations. Processing of an obligation is application specific. An `<Obligation>` may contain the object (resource) action pairing information. If multiple vocabularies are used for resource definitions the origin of the vocabulary MUST be identified.

The obligation should conform to following structure:

```
urn:oasis:names:tc:xacml:3.0:ipc:obligation
```

2.3.1 Encrypt

The Encrypt obligation shall be designated with the following identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt
```


The encrypt obligation can be used to command PEPs (Policy Enforcement Points) to encrypt the resource. This profile does not specify the type of encryption or other parameters to be used; rather, the details of implementation are left to the discretion of policy authors and software developers as to how to best meet their individual requirements.

The following is an example of the Encrypt obligation:

```
<ObligationExpressions>
  <ObligationExpression
    ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
    FulfillOn="Permit"/>
  </ObligationExpression>
</ObligationExpressions>
```

2.3.2 Marking

Marking classification values shall be designated with the following identifier:

```
urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking
```

The marking obligation can be used to command PEPs (Policy Enforcement Points) to embed visual marks, sometimes called watermarks, on data viewed both on-screen and in printed form. Policy authors may use this obligation to meet legal or contractual requirements by forcing PEPs to display text or graphics in accordance with <Permit> decisions. This profile does not specify the text or graphics which can be rendered; rather, the details of implementation are left to the discretion of policy authors as to how to best meet their individual requirements.

The following is an example of the marking obligation:

```
<ObligationExpressions>
  <ObligationExpression
    ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
    FulfillOn="Permit">
    <AttributeAssignmentExpression
      AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
      <AttributeValue
        AttributeId="urn:oasis:names:tc:xacml:2.0:example:attribute:text"
        DataType="http://www.w3.org/2001/XMLSchema#string"
        >Copyright 2011 Acme</AttributeValue>
      </AttributeAssignmentExpression>
    </ObligationExpression>
  </ObligationExpressions>
```

3 Identifiers

This profile defines the following URN identifiers.

3.1 Profile Identifier

The following identifier SHALL be used as the identifier for this profile when an identifier in the form of a URI is required.

```
urn:oasis:names:tc:xacml:3.0:ipc
```

4 Examples (non-normative)

This section contains examples of how the profile attributes can be used.

4.1 Copyright

This example illustrates the use of a copyright for the following scenario:

ip-owner (Acme) grants ip-designee (Wiley Corp) the right to use copyrighted materials (software, images, multimedia) for a limited time in exchange for fees. ip-designee must protect licensed material from unauthorized usage.

Subject attributes	Resource attributes	Obligations
organization: Wiley Corp	copyright: true	encrypt
affiliation-type: customer	ip-owner: Acme	marking: Copyright 2011 Acme
agreement-id: CR101	ip-designee: Wiley Corp	
	agreement-type: copyright-grant	
	agreement-id: CR101	
	effective-date: 2011-07-01T00:00:00	
	expiration-date: 2021-06-30T00:00:00	

4.1.1 Copyright Request

```
<Request ReturnPolicyIdList="true"
  CombinedDecision="false"
  xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
  <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
    <Attribute
      AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >Wiley Corp</AttributeValue>
      </AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
        >urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-
type:customer</AttributeValue>
      </AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >CR101</AttributeValue>
      </AttributeValue>
    </Attribute>
  </Attributes>
  <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:copyright"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
        >true</AttributeValue>
      </AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
```

```

472         >Acme</AttributeValue>
473     </Attribute>
474     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
475         IncludeInResult="true">
476         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
477             >Wiley Corp</AttributeValue>
478     </Attribute>
479     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
480         IncludeInResult="true">
481         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
482             >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-
483 grant</AttributeValue>
484     </Attribute>
485     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
486         IncludeInResult="true">
487         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
488             >CR101</AttributeValue>
489     </Attribute>
490     <Attribute
491         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
492         IncludeInResult="true">
493         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
494             >2011-07-01T00:00:00</AttributeValue>
495     </Attribute>
496     <Attribute
497         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
498         IncludeInResult="true">
499         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
500             >2021-06-30T00:00:00</AttributeValue>
501     </Attribute>
502 </Attributes>
503 </Request>

```

4.1.2 Copyright Policy

This policy can be summarized as follows:

Target: This policy is only applicable to resource type copyright
AND the agreement-type copyright-grant

Rule: This rule is only applicable if Resource ip-owner = Acme
Then if

Subject organization = Wiley Corp AND

Subject agreement-id = Resource agreement-id (CR101, in this case) AND

Resource ip-designee = Wiley Corp AND

“Date and Time” is in the range of effective-date and expiration-date

Then PERMIT

Obligation:

On PERMIT mark AND encrypt the resource.

```

521 <Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
522     PolicyId="copyright-approve"
523     RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
524 overrides"
525     Version="1">
526     <Description>Example access control policy for copyright material</Description>
527     <Target>
528     <AnyOf>
529     <AllOf>
530     <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
531     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#boolean
532     >true</AttributeValue>
533     <AttributeDesignator
534     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:copyright"
535     Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
536     DataType="http://www.w3.org/2001/XMLSchema#boolean"
537     MustBePresent="false"/>
538     </Match>
539     <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
540     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#anyURI
541     >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-
542 grant</AttributeValue>
543     <AttributeDesignator
544     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
545     Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
546     DataType="http://www.w3.org/2001/XMLSchema#anyURI"
547     MustBePresent="false"/>
548     </Match>
549     </AllOf>
550     </AnyOf>
551     </Target>
552     <Rule Effect="Permit" RuleId="Right to use copyrighted material match">
553     <Description>Allow if subject's association to the designated custodian of the
554 copyright agrees</Description>
555     <Target>
556     <AnyOf>
557     <AllOf>
558     <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
559     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
560     >Acme</AttributeValue>
561     <AttributeDesignator
562     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
563     Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
564     DataType="http://www.w3.org/2001/XMLSchema#string"
565     MustBePresent="false"/>
566     </Match>
567     </AllOf>
568     </AnyOf>
569     </Target>
570     <Condition>
571     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:and">
572     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
573     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
574     >Wiley Corp</AttributeValue>
575     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
576     <AttributeDesignator
577     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
578     Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
579     DataType="http://www.w3.org/2001/XMLSchema#string"
580     MustBePresent="false"/>
581     </Apply>
582     </Apply>
583     </Apply>
584     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
585     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
586     <AttributeDesignator
587     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
588     Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
589     DataType="http://www.w3.org/2001/XMLSchema#string"
590     MustBePresent="false"/>
591     </Apply>
592     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
593     <AttributeDesignator

```

```

594         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
595         Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
596         DataType="http://www.w3.org/2001/XMLSchema#string"
597         MustBePresent="false"/>
598     </Apply>
599 </Apply>
600 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
601     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
602     >Wiley Corp</AttributeValue>
603     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
604         <AttributeDesignator
605             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
606             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
607             DataType="http://www.w3.org/2001/XMLSchema#string"
608             MustBePresent="false"/>
609         </Apply>
610     </Apply>
611 </Apply>
612 <Apply
613     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-or-equal">
614     <Apply
615         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
616         <AttributeDesignator
617             AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
618             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
619             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
620             MustBePresent="false"/>
621         </Apply>
622     </Apply>
623     <Apply
624         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
625         <AttributeDesignator
626             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
627             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
628             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
629             MustBePresent="false"/>
630         </Apply>
631     </Apply>
632     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
633     <Apply
634         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
635         <AttributeDesignator
636             AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
637             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
638             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
639             MustBePresent="false"/>
640         </Apply>
641     </Apply>
642     <Apply
643         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
644         <AttributeDesignator
645             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
646             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
647             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
648             MustBePresent="false"/>
649         </Apply>
650     </Apply>
651 </Condition>
652 </Rule>
653 <ObligationExpressions>
654     <ObligationExpression
655         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
656         FulfillOn="Permit">
657         <AttributeAssignmentExpression
658             AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
659             <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
660             >Copyright 2011 Acme</AttributeValue>
661             </AttributeAssignmentExpression>
662         </ObligationExpression>
663     </ObligationExpression>
664     <ObligationExpression
665         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
666         FulfillOn="Permit">
667         </ObligationExpression>
668     </ObligationExpression>
669 </ObligationExpressions>
670 </Policy>

```

4.2 Trademark

This example illustrates the use of a trademark for the following scenario:

ip-owner (Acme) grants ip-designee (Wiley Foundation), a charitable organization, the right to use their trademark logo for a limited time. ip-designee must protect licensed material from unauthorized usage.

Subject attributes	Resource attributes	Obligations
organization: Wiley Foundation	trademark: true	Marking: Acme
affiliation-type: non-profit	ip-owner: Acme	
agreement-id: CR102	ip-designee: Wiley Foundation	
	agreement-type: trademark-grant	
	agreement-id: CR102	
	effective-date: 2011-07-01T00:00:00	
	expiration-date: 2021-06-30T00:00:00	

4.2.1 Trademark Request

```
<Request ReturnPolicyIdList="true"
  CombinedDecision="false"
  xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
  <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
    <Attribute
      AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >Wiley Foundation</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
        >urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type:non-
profit</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >CR102</AttributeValue>
    </Attribute>
  </Attributes>
  <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
        >true</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >Acme</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >Wiley Corp</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
        >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:trademark-
grant</AttributeValue>
    </Attribute>
```

```

717 <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
718       IncludeInResult="true">
719   <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
720       >CR102</AttributeValue>
721 </Attribute>
722 <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
723       IncludeInResult="true">
724   <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
725       >2011-07-01T00:00:00</AttributeValue>
726 </Attribute>
727 <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
728       IncludeInResult="true">
729   <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
730       >2021-06-30T00:00:00</AttributeValue>
731 </Attribute>
732 </Attributes>
733 </Request>

```

4.2.2 Trademark Policy

This policy can be summarized as follows:

Target: This policy is only applicable to resource type “trademark” AND ip-owner = “Acme”

Rule: This rule is only applicable if Subject organization = Wiley Foundation AND
Then if

Subject agreement-id = Resource agreement-id (CR102, in this case) AND
“Date and Time” is in the range of effective-date and expiration-date THEN
PERMIT

Obligation:

On PERMIT mark the resource.

```

748 <Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
749       PolicyId="trademark-approve"
750       RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
751 overrides"
752       Version="1">
753   <Description>Example rights to use trademark policy</Description>
754   <Target>
755     <AnyOf>
756       <AllOf>
757         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
758           <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
759               >true</AttributeValue>
760           <AttributeDesignator
761               AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark"
762               Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
763               DataType="http://www.w3.org/2001/XMLSchema#boolean"
764               MustBePresent="false"/>
765         </Match>
766         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
767           <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
768               >Acme</AttributeValue>
769           <AttributeDesignator
770               AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
771               Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
772               DataType="http://www.w3.org/2001/XMLSchema#string"
773               MustBePresent="false"/>
774         </Match>
775       </AllOf>
776     </AnyOf>

```

```

777 </Target>
778 <VariableDefinition VariableId="acme-agreement-id">
779   <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
780     >CR102</AttributeValue>
781 </VariableDefinition>
782 <Rule Effect="Permit" RuleId="Rights_to_use_trademark_match">
783   <Description>Allow if the IP owner grants use of trademark logo</Description>
784   <Target>
785     <AnyOf>
786       <AllOf>
787         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
788           <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
789             >Wiley Foundation</AttributeValue>
790           <AttributeDesignator
791             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
792             Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
793             DataType="http://www.w3.org/2001/XMLSchema#string"
794             MustBePresent="false"/>
795         </Match>
796       </AllOf>
797     </AnyOf>
798   </Target>
799   <Condition>
800     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:and">
801       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
802         <VariableReference VariableId="acme-agreement-id"/>
803         <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
804           <AttributeDesignator
805             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
806             Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
807             DataType="http://www.w3.org/2001/XMLSchema#string"
808             MustBePresent="false"/>
809         </Apply>
810       </Apply>
811       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
812         <VariableReference VariableId="acme-agreement-id"/>
813         <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
814           <AttributeDesignator
815             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
816             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
817             DataType="http://www.w3.org/2001/XMLSchema#string"
818             MustBePresent="false"/>
819         </Apply>
820       </Apply>
821       <Apply
822         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-or-equal">
823         <Apply
824           FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
825           <AttributeDesignator
826             AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
827             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
828             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
829             MustBePresent="false"/>
830           </Apply>
831           <Apply
832             FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
833             <AttributeDesignator
834               AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
835               Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
836               DataType="http://www.w3.org/2001/XMLSchema#dateTime"
837               MustBePresent="false"/>
838             </Apply>
839           </Apply>
840         </Apply>
841         <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
842           <Apply
843             FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
844             <AttributeDesignator
845               AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
846               Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
847               DataType="http://www.w3.org/2001/XMLSchema#dateTime"
848               MustBePresent="false"/>
849             </Apply>
850           </Apply>

```



```

FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
  <AttributeDesignator
    AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
    Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
    DataType="http://www.w3.org/2001/XMLSchema#dateTime"
    MustBePresent="false"/>
  </Apply>
</Apply>
</Apply>
</Condition>
</Rule>
<ObligationExpressions>
  <ObligationExpression
    ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
    FulfillOn="Permit" >
    <AttributeAssignmentExpression
      AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
        <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
          >Acme</AttributeValue>
        </AttributeAssignmentExpression>
      </ObligationExpression>
    </ObligationExpressions>
  </Policy>

```

4.3 Proprietary

This example illustrates the use of a trade secret for the following scenario:

ip-owner (Acme) grants ip-designee (Wiley Corp) the right to use Acme trade secrets, technical drawings in this case, for a limited time for creation of products sold to ip-owner. ip-designee and ip-owner must protect licensed material from unauthorized usage.

Subject attributes	Resource attributes	Obligations
<i>organization: Wiley Corp</i>	<i>proprietary: true</i>	<i>encrypt</i>
<i>organizational-relationship: supplier</i>	<i>ip-owner: Acme</i>	<i>marking: Acme Proprietary Information: Limited Distribution</i>
<i>agreement-id: CR103</i>	<i>ip-designee: Wiley Corp</i>	
	<i>agreement-type: technical-data-grant</i>	
	<i>agreement-id: CR103</i>	
	<i>effective-date: 2011-07-01T00:00:00</i>	
	<i>expiration-date: 2021-06-30T00:00:00</i>	

4.3.1 Proprietary Request

```

<Request ReturnPolicyIdList="true"
  CombinedDecision="false"
  xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
  <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
    <Attribute
      AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
        >Wiley Corp</AttributeValue>
      </Attribute>
    <Attribute
      AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-relationship"
      IncludeInResult="true">
      <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
        >urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
        relationship:supplier</AttributeValue>
      </Attribute>

```

```

897     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
898       IncludeInResult="true">
899       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
900         >CR103</AttributeValue>
901     </Attribute>
902 </Attributes>
903 <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
904   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary"
905     IncludeInResult="true">
906     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
907       >true</AttributeValue>
908   </Attribute>
909   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
910     IncludeInResult="true">
911     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
912       >Acme</AttributeValue>
913   </Attribute>
914   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
915     IncludeInResult="true">
916     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
917       >Wiley Corp</AttributeValue>
918   </Attribute>
919   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
920     IncludeInResult="true">
921     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
922       >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-data-
923 grant</AttributeValue>
924   </Attribute>
925   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
926     IncludeInResult="true">
927     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
928       >CR103</AttributeValue>
929   </Attribute>
930   <Attribute
931     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
932     IncludeInResult="true">
933     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
934       >2011-07-01T00:00:00</AttributeValue>
935   </Attribute>
936   <Attribute
937     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
938     IncludeInResult="true">
939     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
940       >2021-06-30T00:00:00</AttributeValue>
941   </Attribute>
942 </Attributes>
943 </Request>

```

4.3.2 Proprietary Policy

This policy can be summarized as follows:

Target: This policy is only applicable to resource type “proprietary” AND ip-owner = Acme

Rule: This rule is only applicable if Subject organization = Wiley Foundation AND
organizational-relationship = supplier AND
Resource agreement-type = technical-data-grant

Then if

Resource ip-designee = Wiley Corp AND

Subject agreement-id= Resource agreement-id (CR103, in this case) AND

“Date and Time” is in the range of effective-date and expiration-date

Then PERMIT

Obligation:

On PERMIT mark AND encrypt the resource.

```
<Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
  PolicyId="proprietary-approve"
  RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
overrides"
  Version="1">
  <Description>Example rights to use proprietary (trade secret) material</Description>
  <Target>
    <AnyOf>
      <AllOf>
        <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
          <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
            >true</AttributeValue>
          <AttributeDesignator
            AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary"
            Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
            DataType="http://www.w3.org/2001/XMLSchema#boolean"
            MustBePresent="false"/>
        </Match>
        <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
          <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
            >Acme</AttributeValue>
          <AttributeDesignator
            AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
            Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
            DataType="http://www.w3.org/2001/XMLSchema#string"
            MustBePresent="false"/>
        </Match>
      </AllOf>
    </AnyOf>
  </Target>
  <Rule Effect="Permit" RuleId="Rights to use match">
    <Description>Allow if ip owner grants right to use technical data</Description>
    <Target>
      <AnyOf>
        <AllOf>
          <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
            <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
              >Wiley Corp</AttributeValue>
            <AttributeDesignator
              AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
              Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
              DataType="http://www.w3.org/2001/XMLSchema#string"
              MustBePresent="false"/>
          </Match>
          <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
            <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
              >urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
relationship:supplier</AttributeValue>
            <AttributeDesignator
              AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
relationship"
              Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
              DataType="http://www.w3.org/2001/XMLSchema#anyURI"
              MustBePresent="false"/>
          </Match>
          <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
            <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
              >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-data-
grant</AttributeValue>
            <AttributeDesignator
              AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
              Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
              DataType="http://www.w3.org/2001/XMLSchema#anyURI"
              MustBePresent="false"/>
          </Match>
        </AllOf>
      </AnyOf>
    </Target>
  </Rule>
</Policy>
```

```

1027     </Match>
1028   </AllOf>
1029 </AnyOf>
1030 </Target>
1031 <Condition>
1032   <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:and">
1033     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
1034       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1035         >Wiley Corp</AttributeValue>
1036       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
1037         <AttributeDesignator
1038           AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
1039           Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1040           DataType="http://www.w3.org/2001/XMLSchema#string"
1041           MustBePresent="false"/>
1042       </Apply>
1043     </Apply>
1044     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
1045       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
1046         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1047           >CR103</AttributeValue>
1048       <Apply
1049         FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
1050         <AttributeDesignator
1051           AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
1052           Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
1053           DataType="http://www.w3.org/2001/XMLSchema#string"
1054           MustBePresent="false"/>
1055       </Apply>
1056     </Apply>
1057     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
1058       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1059         >CR103</AttributeValue>
1060     <Apply
1061       FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
1062       <AttributeDesignator
1063         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
1064         Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1065         DataType="http://www.w3.org/2001/XMLSchema#string"
1066         MustBePresent="false"/>
1067     </Apply>
1068   </Apply>
1069 </Apply>
1070 <Apply
1071 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-or-equal">
1072   <Apply
1073     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1074     <AttributeDesignator
1075       AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
1076       Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
1077       DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1078       MustBePresent="false"/>
1079     </Apply>
1080   <Apply
1081     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1082     <AttributeDesignator
1083       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
1084       Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1085       DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1086       MustBePresent="false"/>
1087     </Apply>
1088   </Apply>
1089 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
1090   <Apply
1091     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1092     <AttributeDesignator
1093       AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
1094       Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
1095       DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1096       MustBePresent="false"/>
1097     </Apply>
1098   <Apply
1099     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">

```

```

1100         <AttributeDesignator
1101             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
1102             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1103             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1104             MustBePresent="false"/>
1105         </Apply>
1106     </Apply>
1107 </Apply>
1108 </Condition>
1109 </Rule>
1110 <ObligationExpressions>
1111     <ObligationExpression
1112         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
1113         FulfillOn="Permit">
1114         <AttributeAssignmentExpression
1115             AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
1116             <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
1117                 >Acme Proprietary Information: Limited Distribution</AttributeValue>
1118             </AttributeValue>
1119         </AttributeAssignmentExpression>
1120     </ObligationExpression>
1121     <ObligationExpression
1122         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
1123         FulfillOn="Permit">
1124     </ObligationExpression>
1125 </ObligationExpressions>
1126 </Policy>

```

5 Conformance

Conformance to this profile is defined for **policies** and **requests** generated and transmitted within and between XACML systems.

5.1 Attribute Identifiers

Conformant XACML **policies** and **requests** SHALL use the attribute identifiers defined in Section 2 for their specified purpose, and SHALL NOT use any other identifiers for the purposes defined by attributes in this profile. The following table lists the attributes that must be supported.

Note: “M” is mandatory “O” is optional.

Identifiers	
urn:oasis:names:tc:xacml:3.0:ipc:resource:copyright	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:patent	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:public-domain	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date	M
urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date	M
urn:oasis:names:tc:xacml:3.0:ipc:subject:organization	M
urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-relationship	M
urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type	M
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type	M

urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id	M
urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt	M
urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking	M

5.2 Attribute Values

Conformant XACML **policies** and **requests** SHALL use attribute values in the specified range or patterns as defined for each attribute in Section 2 (when a range or pattern is specified).

NOTE: In order to process conformant XACML **policies** and **requests** correctly, **PIP** and **PEP** modules may have to translate native data values into the datatypes and formats specified in this profile.

Appendix A. Acknowledgements

The following individuals have participated in the creation of this specification and are gratefully acknowledged:

Participants:

John Tolbert, The Boeing Company
Crystal Hayes, The Boeing Company
Richard Hill, The Boeing Company
Paul Tyson, Bell Helicopter Textron
Danny Thorpe, Quest Software
Remon Sinnema, EMC
Andy Han, Nextlabs Inc
Erik Rissanen, Axiomatics AB
David Brossard, Axiomatics AB

Committee members during profile development:

Person	Organization	Role
James Ducharme	Aveksa, Inc.	Member
David Brossard	Axiomatics	Voting Member
Gerry Gebel	Axiomatics	Member
Erik Rissanen	Axiomatics	Voting Member
Abbie Barbir	Bank of America	Member
Rakesh Radhakrishnan	Bank of America	Member
Paul Tyson	Bell Helicopter Textron Inc.	Voting Member
Doron Grinstein	Quest Software	Member
Ronald Jacobson	CA Technologies	Member
Masum Hasan	Cisco Systems	Member
Anil Tappetla	Cisco Systems	Member
Gareth Richards	EMC	Member
Remon Sinnema	EMC	Voting Member
Craig Forster	IBM	Member
Richard Franck	IBM	Member
Michiharu Kudo	IBM	Member
Sridhar Muppidi	IBM	Member
Nataraj Nagaratnam	IBM	Member
Gregory Neven	IBM	Voting Member
Franz-Stefan Preiss	IBM	Member
Ron Williams	IBM	Member
Stefan Bohm	iC Consult GmbH	Member
David Chadwick	Individual	Member
David Choy	Individual	Voting Member
Jan Herrmann	Individual	Voting Member

Bill Parducci*	Individual	Chair
Bob Morgan	Internet2	Member
Duane Decouteau	Jericho Systems	Member
Philip Lieberman	Lieberman Software	Member
Thomas Hardjono	M.I.T.	Member
Roy D'Souza	Microsoft	Member
Anthony Nadalin	Microsoft	Voting Member
Andy Han	NextLabs, Inc.	Member
Naomaru Itoi	NextLabs, Inc.	Member
Kamalendu Biswas	Oracle	Member
Willem de Pater	Oracle	Member
Subbu Devulapalli	Oracle	Member
Rich Levinson	Oracle	Secretary
Hal Lockhart	Oracle	Chair
Prateek Mishra	Oracle	Member
Kenneth Peeples	Red Hat	Member
Anil Saldhana	Red Hat	Member
Darran Rolls	SailPoint Technologies	Member
Crystal Hayes	The Boeing Company*	Voting Member
Richard Hill	The Boeing Company*	Voting Member
John Tolbert	The Boeing Company*	Voting Member
Martin Smith	US Department of Homeland Security*	Member
John Davis	Veterans Health Administration	Member
Duane DeCouteau	Veterans Health Administration	Member
David Staggs	Veterans Health Administration	Member

Appendix B. Non-Normative Text

This table maps possible overlaps between IP type classifications. This list is neither normative nor exhaustive, but serves as a guide for interoperable implementations.

	Copyright	Patent	Proprietary	Public- Domain	Trademark
Copyright	-	Yes	No	No	Yes
Patent	Yes	-	No	No	Yes
Proprietary	No	No	-	No	No
Public- Domain	No	No	No	-	No
Trademark	Yes	Yes	No	No	-

Appendix C. Revision History

Revision	Date	Editor	Changes Made
CD 1	6/18/2009	John Tolbert	Initial committee draft.
WD 2	2/25/2010	John Tolbert	Revised committee draft.
CD 2	5/5/10	John Tolbert	Revised committee draft, fixed links and formatting.
WD 3	8/9/2011	John Tolbert/Crystal Hayes	Added resource attributes for "Effective Date", "Expiration Date", and "Use Restrictions"; changed text for "License"; updated membership list.
WD4	9/7/2011	Paul Tyson, with response by John Tolbert and Crystal Hayes	Removed PII and Nationality from glossary. Removed Nationality as a subject attribute. Changed "License" to "Agreement". Added resource and subject attributes for "IP Agreement". Removed "Use Restrictions" and "Authority" from resource attributes. Moved "Encryption Type", "Marking", and "Disposal" to Obligations. Posed additional questions and comments for consideration.
WD5	10/13/2011	John Tolbert/Richard Hill	Removed all action attributes. Added "Affiliation Type" as a subject attribute. Removed "Disposal" as an obligation. Changed "Organization" to "Organizational-Affiliation". Added sample policies.
WD6	11/16/2011	John Tolbert, Richard Hill, Crystal Hayes, and Paul Tyson	Removed IP-Type and IP-Data, replaced with individual URNs. Added text to introduction and glossary. Incorporated Paul Tyson's changes from edited WD-05.
WD7	1/29/2012	John Tolbert, Richard Hill, Crystal Hayes, Paul Tyson, David Brossard, Danny Thorpe, Remon Sinnema	Added URNs for "Affiliation-Type" and "Agreement-Type". Added new subject attribute values with URNs for "Organizational-relationship" and "Organization-Type". Changed DataType of "Effective-Date" and "Expiration-Date" from date to dateTime. Changed some attribute descriptions. Fixed typographical errors. Changed (Updated) examples.
WD8	4/30/2012	John Tolbert, Richard Hill, Andy Han, Erik Rissanen	Changed attribute name "Organizational-Affiliation" to "Organization". Added additional guidance to descriptions to section 2.1 "Resource Attributes", section 2.1.9 "Agreement-Id", section 2.2.4 "Affiliation-Type". Removed "profiles" from obligation urn

			examples. Updated examples; moved some rule target matches to the rule's condition section.
--	--	--	---

1162