



# XACML Intellectual Property Control (IPC) Profile Version 1.0

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#### 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>~~ 22 January 2013. OASIS  
Standard. <http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-os-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 [OASIS](#) 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.

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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>).

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<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csprd04/xacml-3.0-ipc-v1.0-csprd04-en.html>.

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# Table of Contents

1	Introduction .....	7
1.1	Glossary .....	8
1.2	Terminology .....	10
1.3	Normative References .....	10
1.4	Non-Normative References .....	11
1.5	Scope .....	11
1.6	Use cases .....	11
1.7	Disclaimer .....	13
2	Profile .....	14
2.1	Resource Attributes .....	14
2.1.1	Copyright .....	14
2.1.2	Patent .....	14
2.1.3	Proprietary .....	14
2.1.4	Public-Domain .....	14
2.1.5	Trademark .....	14
2.1.6	IP-Owner .....	14
2.1.7	IP-Designee .....	15
2.1.8	Agreement-Type .....	15
2.1.9	Agreement-Id .....	15
2.1.10	Effective-Date .....	16
2.1.11	Expiration-Date .....	17
2.2	Subject Attributes .....	17
2.2.1	Organization .....	17
2.2.2	Organization-Type .....	17
2.2.3	Organizational-Relationship .....	18
2.2.4	Affiliation-Type .....	18
2.2.5	Agreement-Id .....	19
2.3	Obligations .....	19
2.3.1	Encrypt .....	19
2.3.2	Marking .....	19
3	Identifiers .....	21
3.1	Profile Identifier .....	21
4	Examples (non-normative) .....	22
4.1	Copyright .....	22
4.1.1	Copyright Request .....	22
4.1.2	Copyright Policy .....	23
4.2	Trademark .....	26
4.2.1	Trademark Request .....	26
4.2.2	Trademark Policy .....	27
4.3	Proprietary .....	30
4.3.1	Proprietary Request .....	30
4.3.2	Proprietary Policy .....	32
5	Conformance .....	36

5.1 Attribute Identifiers .....	36
5.2 Attribute Values .....	37
Appendix A. Acknowledgements .....	38
Appendix B. Non-Normative Text .....	44
Appendix C. Revision History .....	45
1 Introduction .....	7
1.1 Glossary .....	8
1.2 Terminology .....	10
1.3 Normative References .....	10
1.4 Non-Normative References .....	11
1.5 Scope .....	11
1.6 Use cases .....	11
1.7 Disclaimer .....	13
2 Profile .....	14
2.1 Resource Attributes .....	14
2.1.1 Copyright .....	14
2.1.2 Patent .....	14
2.1.3 Proprietary .....	14
2.1.4 Public-Domain .....	14
2.1.5 Trademark .....	14
2.1.6 IP-Owner .....	14
2.1.7 IP-Licensee .....	15
2.1.8 Agreement-Type .....	15
2.1.9 Agreement-Id .....	15
2.1.10 Valid-Agreement-Exists .....	16
2.1.11 Number-Of-Valid-Agreements .....	16
2.1.12 Work-Effort .....	16
2.1.13 Authorized-End-Use .....	16
2.1.14 Effective-Date .....	17
2.1.15 Expiration-Date .....	17
2.2 Subject Attributes .....	17
2.2.1 Subject-ID .....	17
2.2.2 Organization .....	17
2.2.3 Business-Context .....	17
2.2.4 Subject-To-Organization-Relationship .....	18
2.2.5 Agreement-Id .....	19
2.3 Obligations .....	19
2.3.1 Encrypt .....	19
2.3.2 Marking .....	19
3 Identifiers .....	21
3.1 Profile Identifier .....	21
4 Examples (non-normative) .....	22
4.1 Copyright .....	22
4.1.1 Copyright Request .....	22
4.1.2 Copyright Policy .....	23

4.2 Trademark.....	26
4.2.1 Trademark Request.....	26
4.2.2 Trademark Policy .....	27
4.3 Proprietary .....	30
4.3.1 Proprietary Request .....	30
4.3.2 Proprietary Policy .....	32
5 Conformance .....	36
5.1 Attribute Identifiers .....	36
5.2 Attribute Values .....	37
Appendix A. Acknowledgements .....	38
Appendix B. Non-Normative Text .....	44
Appendix C. Revision History .....	45

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# 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 <sup>TM</sup>
- For trademarks registered with the USPTO <sup>®</sup>

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**

### **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.

### **Authorized end use**

The specific authorized end uses to which the IP resource may be applied, in accordance with the IP agreement. This attribute represents a vocabulary of verbs or nominalizations that define the end-use activities appropriate for the work effort. Examples may include (but are not limited to): design, manufacture, and maintenance.

### **Business context**

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-DesigneeLicensee

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.

#### Subject-ID

Element specifies the principal that is the subject of the request context. May include users, devices, or applications.

#### Subject-to-Organization-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".

#### 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".

#### Work effort

This attribute can be used to indicate the specific work effort, statement of work, project, or program which is associated with the IP resource. This attribute provides additional granularity to limit access to users within organizations to those with a specific need to know for a given work effort.

## 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, <i>Key words for use in RFCs to Indicate Requirement Levels</i> , <a href="http://www.ietf.org/rfc/rfc2119.txt">http://www.ietf.org/rfc/rfc2119.txt</a> , IETF RFC 2119, March 1997.   |
| [XACML3]  | OASIS Standard, "eXtensible Access Control Markup Language (XACML) Version 3.0", April 2010. <a href="http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-en.doc">http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-en.doc</a> |

[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](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](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](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.

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

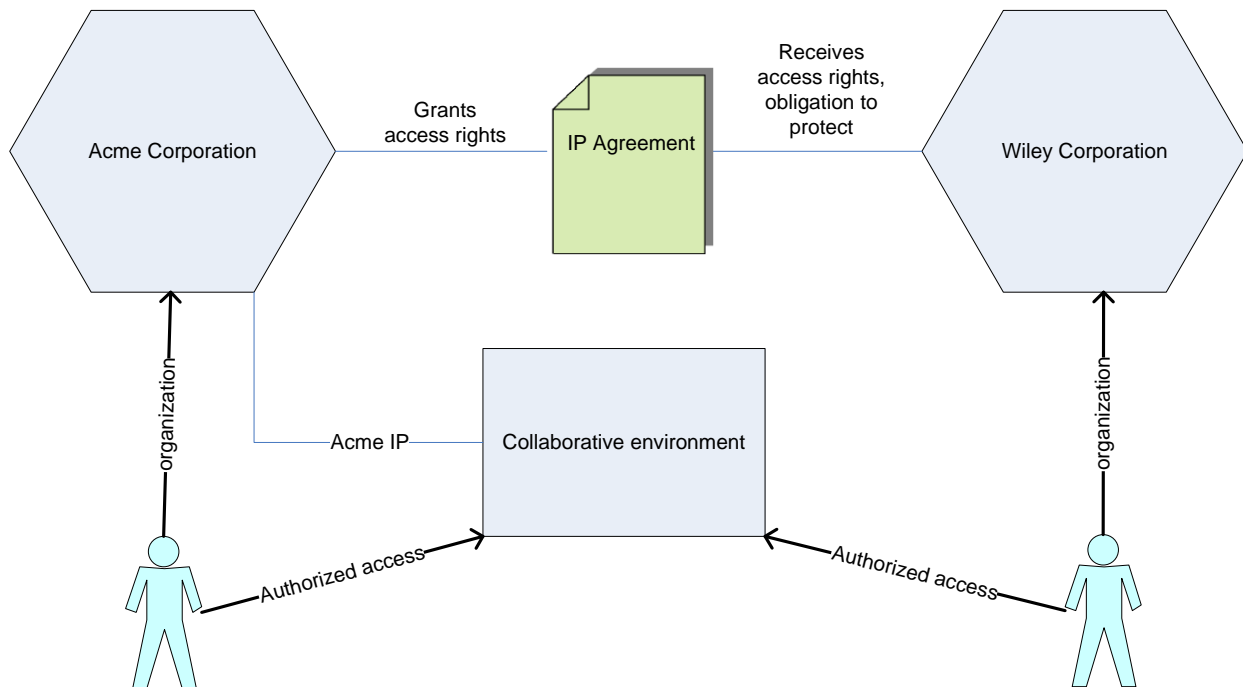
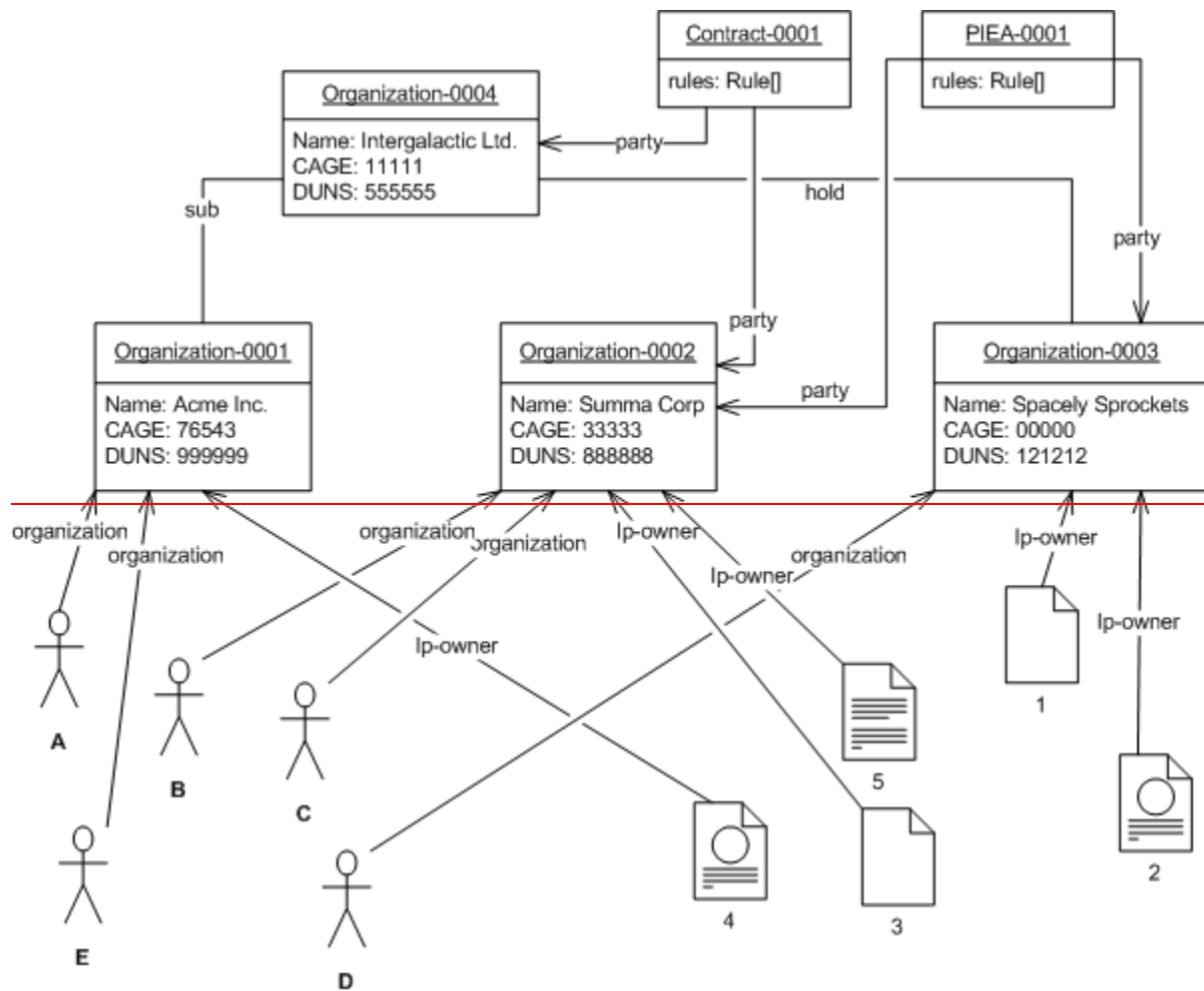


Figure 1 Typical IP scenario (Organization names, ~~CAGE [five position code that identifies contractors doing business with the United States Government, NATO member nations, and other foreign governments.], and DUNS [a system developed and regulated by Dun & Bradstreet (D&B), that assigns a unique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

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

The conditions that determine IP access include properties and relationships of entities remotely related to the subjects and resources involved in an IP transaction. XACML relies on data-valued attributes directly attached to subjects and resource. Therefore, the complex object structure representing the real world must be condensed to data values of attributes in the XACML categories. For example, a XACML request context for a subject A might have organization="999999" and agreement-identifier="~~Contract-0001CR-101~~". In this case, one particular attribute of the organization object representing "Acme Inc." has been selected to fill the XACML IP C subject:organization attribute value. ~~The multiple~~Multiple object relationships from ~~person A~~subjects to ~~Contract-0001~~have been "IP Agreement" may exist, and would be telescoped into the single string value, "~~Contract-0001~~depicted as "IP Agreement", of the subject:agreement-~~identifierid~~ attribute. This "flattening" process is somewhat arbitrary; however, it must not introduce ambiguity, and may be influenced by performance or implementation considerations. Some of the attributes specified in this profile represent some such flattening process, and assume the existence of some types of remote objects that may not be represented directly in an XACML context.

## 1.7 Disclaimer

NOTHING IN THIS PROFILE IS INTENDED TO BE A LEGALLY CORRECT INTERPRETATION OR APPLICATION OF U.S. OR ANY GOVERNMENT INTELLECTUAL PROPERTY LAWS OR REGULATIONS. USE OF THIS PROFILE IN AN ACCESS CONTROL SYSTEM DOES NOT CONSTITUTE COMPLIANCE WITH ANY INTELLECTUAL PROPERTY PROTECTION REQUIREMENTS, REGULATIONS, OR RESTRICTIONS. THIS PROFILE HAS NOT BEEN REVIEWED OR ENDORSED BY THE U.S. OR ANY OTHER GOVERNMENT AGENCIES RESPONSIBLE FOR ENFORCING INTELLECTUAL PROPERTY LAWS, NOR BY ANY LEGAL EXPERT IN THIS FIELD.

Organizations that use this profile should ensure their intellectual property protection by engaging 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
```

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

### 2.1.7 IP-**DesigneeLicensee**

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

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

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

### 2.1.8 Agreement-Type

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

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

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

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

The range of URN values of this attribute SHALL be

```
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:non-  
disclosure-agreement  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:proprietary-  
information-agreement  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-  
data-grant  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-  
grant  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:patent-grant  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:trademark-  
grant  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:cross-  
licensing-grant  
urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:royalty-  
bearing
```

### 2.1.9 Agreement-Id

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

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

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

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



### 2.1.10 Valid-Agreement-Exists

The indicator in which a business document representing the IP agreement that covers this resource exists shall be designated with the following attribute identifier.

`urn:oasis:names:tc:xacml:3.0:ipc:resource:valid-agreement-exists`

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

One scenario in which this attribute can be used is in the case where a PEP indicates whether or not an agreement exists. In this scenario it is assumed that the determination on whether an agreement exists occurs before the authorization request is sent to a PDP. An alternative scenario is to let the PDP determine if the appropriate agreement, associated with the resource authorization request, exists via an attribute query to a PIP. In this alternative scenario the resource `valid-agreement-exists` attribute would not be used in the XACML request.

### 2.1.11 Number-Of-Valid-Agreements

The number of business documents representing the IP agreement that covers this resource shall be designated with the following attribute identifier.

`urn:oasis:names:tc:xacml:3.0:ipc:resource:number-of-valid-agreements`

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

Although this attribute can be used in the case where a PEP indicates the number of agreements that exist in the authorization request; a more likely scenario is to let the PDP determine the number of agreements, associated with the resource authorization request, that exists via an attribute query to a PIP. In this alternative scenario the resource `number-of-valid-agreements` attribute would not be used in the XACML request.

### 2.1.12 Work-Effort

Work-effort values shall be designated with the following attribute identifier:

`urn:oasis:names:tc:xacml:3.0:ipc:resource:work-effort`

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

This attribute can be used to indicate the specific work effort, statement of work, project, or program which is associated with the IP resource. This attribute provides additional granularity to limit access to users within organizations to those with a specific need to know for a given work effort.

### 2.1.13 Authorized-End-Use

#### ~~2.1.101.1.1~~ **Authorized-end-useEffective-Date**

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

`urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-use`

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

This attribute can be used to indicate the specific authorized end uses to which the IP resource may be applied, in accordance with the IP agreement. This attribute represents a vocabulary of verbs or nominalizations that define the end-use activities appropriate for the work effort. Examples may include (but are not limited to): design, manufacture, and maintenance.

The range of URN values of this attribute SHALL be

`urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-use:design`  
`urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-`  
`use:manufacture`  
`urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-`  
`use:maintenance`



### 2.1.14 Effective-Date

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-Time>.

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.

### 2.1.15 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-Time>.

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 Subject-ID

Subject-ID classification values shall be designated with the following attribute identifier:

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

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

This is the identifier for the subject, which may include user identifiers, machine identifiers, and/or application identifiers.

### 2.2.2 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~~Licensee.

### 2.2.2 Organization-Type

### 2.2.3 Business-Context

The ~~type~~business context of the subject's organization (~~identified by the organization attribute~~), ~~for the purpose of intellectual property rights, 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:organization-typebusiness-context`

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:commercialbusiness-context:customer  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-type:non-  
profitbusiness-context:supplier  
urn:oasis:names:tc:xacml:3.0:ipc:subject:organization-  
type:governmentbusiness-context:partner
```

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-  
relationshipbusiness-context:primary-contractor
```

~~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:customerbusiness-context:subcontractor  
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-  
relationshipbusiness-context:authorized-sublicensor
```

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

## 2.2.4 Affiliation-Type

### 2.2.4 Subject-To-Organization-Relationship

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

```
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-typesubject-to-  
organization-relationship
```

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

Implementers can create sub-categories of ~~affiliation-type~~~~Subject-to-organization-relationship~~ 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-typesubject-to-  
organization-relationship:employee  
urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-typesubject-to-  
organization-relationship: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~~subject-to-organization-relationship 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 contains 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
```

```
506      ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
507      FulfillOn="Permit">
508    <AttributeAssignmentExpression
509      AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
510      <AttributeValue
511 | AttributeId="urn:oasis:names:tc:xacml:2.0:example:attribute:text"
512      DataType="http://www.w3.org/2001/XMLSchema#string"
513      >Copyright 2011 Acme</AttributeValue>
514    </AttributeAssignmentExpression>
515  </ObligationExpression>
516</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-designeeLicensee (Wiley Corp) the right to use copyrighted materials (software, images, multimedia) for a limited time in exchange for fees. ip-designeeLicensee must protect licensed material from unauthorized usage.*

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

#### 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>
      </Attribute>
      <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-
type:agreement-id"
        IncludeInResult="true">
        <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
          >urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-
type:customer</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>
          </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>
          </Attribute>
        </Attributes>
      </Request>
```

```

564 <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
565   IncludeInResult="true">
566   <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
567     >Acme</AttributeValue>
568   </Attribute>
569   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-
570     designeelicensee"
571     IncludeInResult="true">
572     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
573       >Wiley Corp</AttributeValue>
574     </Attribute>
575     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
576       IncludeInResult="true">
577       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
578         >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-
579         grant</AttributeValue>
580       </Attribute>
581       <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
582         IncludeInResult="true">
583         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
584           >CR101</AttributeValue>
585         </Attribute>
586       <Attribute
587         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
588         IncludeInResult="true">
589         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
590           >2011-07-01T00:00:00</AttributeValue>
591         </Attribute>
592       <Attribute
593         AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
594         IncludeInResult="true">
595         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
596           >2021-06-30T00:00:00</AttributeValue>
597         </Attribute>
598       </Attributes>
599 </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~~licensee = 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.

```

617 <Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
618   PolicyId="copyright-approve"
619   RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
620 overrides"
621   Version="1">
622   <Description>Example access control policy for copyright material policy</Description>
623   <Target>
624     <AnyOf>
625       <AllOf>
626         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
627           <AttributeValue
628             DataType=http://www.w3.org/2001/XMLSchema#boolean"http://www.w3.org/2001/XMLSchema#bool
629 ean"
630             >true</AttributeValue>
631           <AttributeDesignator
632             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:copyright"
633             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
634             DataType="http://www.w3.org/2001/XMLSchema#boolean"
635             MustBePresent="false"/>
636         </Match>
637         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
638           <AttributeValue
639             DataType=http://www.w3.org/2001/XMLSchema#anyURI"http://www.w3.org/2001/XMLSchema#anyUR
640 I"
641             >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:copyright-
642 grant</AttributeValue>
643           <AttributeDesignator
644             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
645             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
646             DataType="http://www.w3.org/2001/XMLSchema#anyURI"
647             MustBePresent="false"/>
648           </Match>
649         </AllOf>
650       </AnyOf>
651     </Target>
652     <Rule Effect="Permit" RuleId="Right_to_use_copyrighted_material_match">
653       <Description>Allow if subject's association to the designated custodian of the
654       copyright agrees</Description>
655       <Target>
656         <AnyOf>
657           <AllOf>
658             <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
659               <AttributeValue
660                 DataType=http://www.w3.org/2001/XMLSchema#string"http://www.w3.org/2001/XMLSchema#strin
661 g"
662                 >Acme</AttributeValue>
663               <AttributeDesignator
664                 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
665                 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
666                 DataType="http://www.w3.org/2001/XMLSchema#string"
667                 MustBePresent="false"/>
668             </Match>
669           </AllOf>
670         </AnyOf>
671       </Target>
672       <Condition>
673         <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:and">
674           <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
675             <AttributeValue
676               DataType=http://www.w3.org/2001/XMLSchema#string"http://www.w3.org/2001/XMLSchema#strin
677 g"
678               >Wiley Corp</AttributeValue>
679             <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
680               <AttributeDesignator
681                 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
682                 Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
683                 DataType="http://www.w3.org/2001/XMLSchema#string"
684                 MustBePresent="false"/>
685             </Apply>
686           </Apply>
687           <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
688             <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">

```



```

690         <AttributeDesignator
691             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
692             Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
693             DataType="http://www.w3.org/2001/XMLSchema#string"
694             MustBePresent="false"/>
695     </Apply>
696     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
697         <AttributeDesignator
698             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
699             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
700             DataType="http://www.w3.org/2001/XMLSchema#string"
701             MustBePresent="false"/>
702     </Apply>
703 </Apply>
704 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
705     <AttributeValue
706         DataType=http://www.w3.org/2001/XMLSchema#string="http://www.w3.org/2001/XMLSchema#string"
707         >Wiley Corp</AttributeValue>
708     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
709         <AttributeDesignator
710             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
711             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
712             DataType="http://www.w3.org/2001/XMLSchema#string"
713             MustBePresent="false"/>
714         </Apply>
715     </Apply>
716 </Apply>
717 <Apply
718     FunctionId="urn:oasis:names:tc:xacml:1.0:function:licensee"
719     Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
720     DataType="http://www.w3.org/2001/XMLSchema#string"
721     MustBePresent="false"/>
722 </Apply>
723 </Apply>
724 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-
725 or-equal">
726     <Apply
727         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
728         <AttributeDesignator
729             AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
730             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
731             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
732             MustBePresent="false"/>
733         </Apply>
734     <Apply
735         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
736         <AttributeDesignator
737             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
738             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
739             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
740             MustBePresent="false"/>
741         </Apply>
742     </Apply>
743 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
744     <Apply
745         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
746         <AttributeDesignator
747             AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
748             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
749             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
750             MustBePresent="false"/>
751         </Apply>
752     <Apply
753         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
754         <AttributeDesignator
755             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
756             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
757             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
758             MustBePresent="false"/>
759         </Apply>
760     </Apply>
761 </Apply>
762 </Condition>

```

```

763 </Rule>
764 <ObligationExpressions>
765   <ObligationExpression
766     ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
767     FulfillOn="Permit">
768     <AttributeAssignmentExpression
769       AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
770       <AttributeValue
771         DataType="http://www.w3.org/2001/XMLSchema#string"="http://www.w3.org/2001/XMLSchema#string"
772       >Copyright 2011 Acme</AttributeValue>
773     </AttributeAssignmentExpression>
774   </ObligationExpression>
775   <ObligationExpression
776     ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
777     FulfillOn="Permit">
778   </ObligationExpression>
779 </ObligationExpressions>
780 </Policy>

```

## 4.2 Trademark

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

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

Subject attributes	Resource attributes	Obligations
organization: Wiley Foundation	trademark: true	Marking: Acme
agreement-id: CR102 affiliation-type: non-profit	ip-owner: Acme	
agreement-id: CR102	ip-designee licensee: 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

```

789 <Request ReturnPolicyIdList="true"
790   CombinedDecision="false"
791   xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
792   <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
793     <Attribute
794       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
795       IncludeInResult="true">
796       <AttributeValue
797         DataType="http://www.w3.org/2001/XMLSchema#string"="http://www.w3.org/2001/XMLSchema#string"
798       >Wiley Foundation</AttributeValue>
799     </Attribute>
800     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type"
801       IncludeInResult="true">
802       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
803         >urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type:non-
804         profit</AttributeValue>
805     </Attribute>
806     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
807       IncludeInResult="true">

```

```

809     <AttributeValue
810     DataType="http://www.w3.org/2001/XMLSchema#string"= "http://www.w3.org/2001/XMLSchema#string"
811     >CR102</AttributeValue>
812   </Attribute>
813 </Attributes>
814 <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
815   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark"
816     IncludeInResult="true">
817     <AttributeValue
818     DataType="http://www.w3.org/2001/XMLSchema#boolean"= "http://www.w3.org/2001/XMLSchema#boolean"
819     >true</AttributeValue>
820   </Attribute>
821   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
822     IncludeInResult="true">
823     <AttributeValue
824     DataType="http://www.w3.org/2001/XMLSchema#string"= "http://www.w3.org/2001/XMLSchema#string"
825     >Acme</AttributeValue>
826   </Attribute>
827   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-
828     designee:licensee"
829     IncludeInResult="true">
830     <AttributeValue
831     DataType="http://www.w3.org/2001/XMLSchema#string"= "http://www.w3.org/2001/XMLSchema#string"
832     >Wiley Corp</AttributeValue>
833   </Attribute>
834   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
835     IncludeInResult="true">
836     <AttributeValue
837     DataType="http://www.w3.org/2001/XMLSchema#anyURI"= "http://www.w3.org/2001/XMLSchema#anyURI"
838     >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:trademark-
839     grant</AttributeValue>
840   </Attribute>
841   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
842     IncludeInResult="true">
843     <AttributeValue
844     DataType="http://www.w3.org/2001/XMLSchema#string"= "http://www.w3.org/2001/XMLSchema#string"
845     >CR102</AttributeValue>
846   </Attribute>
847   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
848     IncludeInResult="true">
849     <AttributeValue
850     DataType="http://www.w3.org/2001/XMLSchema#dateTime"= "http://www.w3.org/2001/XMLSchema#dateTime"
851     >2011-07-01T00:00:00</AttributeValue>
852   </Attribute>
853   <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
854     IncludeInResult="true">
855     <AttributeValue
856     DataType="http://www.w3.org/2001/XMLSchema#dateTime"= "http://www.w3.org/2001/XMLSchema#dateTime"
857     >2021-06-30T00:00:00</AttributeValue>
858   </Attribute>
859 </Attributes>
860 </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.

```
<Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
  PolicyId="trademark-approve"
  RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
overrides"
  Version="1">
  <Description>Example rights-to-use-trademark policy</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="http://www.w3.org/2001/XMLSchema#bool
ean"
          >true</AttributeValue>
          <AttributeDesignator
            AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark"
            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="http://www.w3.org/2001/XMLSchema#strin
g"
          >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>
  <VariableDefinition VariableId="acme-agreement-id">
    <AttributeValue
DataType=http://www.w3.org/2001/XMLSchema#string="http://www.w3.org/2001/XMLSchema#strin
g"
    >CR102</AttributeValue>
  </VariableDefinition>
  <Rule Effect="Permit" RuleId="Rights_to_use_trademark_match">
    <Description>Allow if the IP owner grants use of trademark logo</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="http://www.w3.org/2001/XMLSchema#strin
g"
            >Wiley Foundation</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>
        </AllOf>
      </AnyOf>
    </Target>
```

```

942 <Condition>
943   <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:and">
944     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
945       <VariableReference VariableId="acme-agreement-id"/>
946       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
947         <AttributeDesignator
948           AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
949           Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
950           DataType="http://www.w3.org/2001/XMLSchema#string"
951           MustBePresent="false"/>
952       </Apply>
953     </Apply>
954     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
955       <VariableReference VariableId="acme-agreement-id"/>
956       <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
957         <AttributeDesignator
958           AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
959           Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
960           DataType="http://www.w3.org/2001/XMLSchema#string"
961           MustBePresent="false"/>
962       </Apply>
963     </Apply>
964   </Apply>
965   FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-or-equal">
966     <Apply
967       FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
968       <AttributeDesignator
969         AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
970         Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
971         DataType="http://www.w3.org/2001/XMLSchema#dateTime"
972         MustBePresent="false"/>
973       </Apply>
974     </Apply>
975     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
976     <AttributeDesignator
977       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
978       Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
979       DataType="http://www.w3.org/2001/XMLSchema#dateTime"
980       MustBePresent="false"/>
981     </Apply>
982   </Apply>
983   <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
984     <Apply
985       FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
986       <AttributeDesignator
987         AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
988         Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
989         DataType="http://www.w3.org/2001/XMLSchema#dateTime"
990         MustBePresent="false"/>
991       </Apply>
992     </Apply>
993     FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
994     <AttributeDesignator
995       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
996       Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
997       DataType="http://www.w3.org/2001/XMLSchema#dateTime"
998       MustBePresent="false"/>
999     </Apply>
1000   </Apply>
1001 </Apply>
1002 </Condition>
1003 </Rule>
1004 <ObligationExpressions>
1005   <ObligationExpression
1006     ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
1007     FulfillOn="Permit" >
1008     <AttributeAssignmentExpression
1009       AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
1010       <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
1011       = "http://www.w3.org/2001/XMLSchema#string"
1012       >Acme</AttributeValue>
1013     </AttributeAssignmentExpression>
1014   </ObligationExpression>

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</ObligationExpressions>

</Policy>

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4.3 Proprietary

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

*ip-owner (Acme) grants ~~ip-designee~~licensee (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~~licensee and ip-owner must protect licensed material from unauthorized usage.*

Subject attributes	Resource attributes	Obligations
organization: <b>Wiley Corp</b>	proprietary: <b>true</b>	encrypt
<del>organizational</del> subject-to-organization-relationship: <b>supplier</b>	ip-owner: <b>Acme</b>	marking: <b>Acme Proprietary Information: Limited Distribution</b>
agreement-id: <b>CR103</b>	<del>ip-designee</del> licensee: <b>Wiley Corp</b>	
	agreement-type: <b>technical-data-grant</b>	
	<del>valid-agreement-exists</del> : <b>true</b>	
	agreement-id: <b>CR103</b>	
	effective-date: <b>2011-07-01T00:00:00</b> <del>work-effort</del> : <b>Acme Products</b>	
	expiration-date: <b>2021-06-30T00:00:00</b> <del>authorized-end-use</del> : <b>manufacture</b>	

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4.3.1 Proprietary Request

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<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:agreement-id"

IncludeInResult="true">

<AttributeValue

DataType=http://www.w3.org/2001/XMLSchema#string

>CR103</AttributeValue>

</Attribute>

<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~~subject-to-

~~organization~~-relationship"

IncludeInResult="true">

<AttributeValue

DataType=http://www.w3.org/2001/XMLSchema#anyURI"

>urn:oasis:names:tc:xacml:3.0:ipc:subject:~~organizational~~subject-to-organization-

relationship:supplier</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"

>CR103</AttributeValue>

</Attribute>

</Attributes>

```

1055 <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
1056   <Attribute
1057     <Attribute
1058       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary"
1059       IncludeInResult="true">
1060         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
1061           >true</AttributeValue>
1062       </Attribute>
1063     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
1064       IncludeInResult="true">
1065       IncludeInResult="true">
1066         <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1067           >Acme</AttributeValue>
1068       </Attribute>
1069     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
1070       IncludeInResult="true">
1071       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1072         >Wiley Corp</AttributeValue>
1073     </Attribute>
1074   </Attribute>
1075   <Attribute
1076     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
1077     IncludeInResult="true">
1078     IncludeInResult="true">
1079     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
1080       >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-data-
1081 grant</AttributeValue>
1082   </Attribute>
1083   <Attribute
1084     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-idproprietary"
1085     IncludeInResult="true">
1086     <AttributeValue
1087       DataType="http://www.w3.org/2001/XMLSchema#string"=http://www.w3.org/2001/XMLSchema#bool
1088 ean
1089     >CR103>true</AttributeValue>
1090   </Attribute>
1091   <Attribute
1092     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"ip-
1093 license"
1094     IncludeInResult="true">
1095     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
1096       >Wiley Corp</AttributeValue>
1097   </Attribute>
1098   <Attribute
1099     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:work-effort"
1100     IncludeInResult="true">
1101     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
1102       >Acme Products</AttributeValue>
1103   </Attribute>
1104   <Attribute
1105     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-use"
1106     IncludeInResult="true">
1107     <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#anyURI
1108       >urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-
1109 use:manufacture</AttributeValue>
1110   </Attribute>
1111 </Attributes>
1112 <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment">
1113   <Attribute
1114     AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
1115     IncludeInResult="true">
1116     <AttributeValue
1117       DataType="http://www.w3.org/2001/XMLSchema#dateTime"=http://www.w3.org/2001/XMLSchema#da
1118 teTime
1119     >2011-07-01T00:00:00>2012-11-27T00:00:00</AttributeValue>
1120   </Attribute>
1121   <Attribute
1122     AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
1123     IncludeInResult="true">
1124     <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1125       >2021-06-30T00:00:00</AttributeValue>
1126   </Attribute>
1127 </Attributes>

```



</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 valid-agreement-exists\*~~

~~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.

\* Note: The PDP determines if a valid agreement exists via an attribute query to a PIP.

```
<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
policy</Description>
  <Target>
    <AnyOf>
      <AllOf>
        <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
          <AttributeValue
DataTypes=http://www.w3.org/2001/XMLSchema#boolean"http://www.w3.org/2001/XMLSchema#bool
ean"
            >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
DataTypes=http://www.w3.org/2001/XMLSchema#string"http://www.w3.org/2001/XMLSchema#strin
g"
            >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>
```



```

1183     </AllOf>
1184   </AnyOf>
1185 </Target>
1186 <Rule Effect="Permit" RuleId="Rights to use match">
1187   <Description>Allow if ip owner grants right to use technical data</Description>
1188   <Target>
1189     <AnyOf>
1190       <AllOf>
1191         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:stringboolean-equal">
1192           <AttributeValue
1193 Data Type="http://www.w3.org/2001/XMLSchema#string"="http://www.w3.org/2001/XMLSchema#boolean"
1194           >Wiley Corp</AttributeValue>
1195           <AttributeDesignator
1196 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizationresource:valid-
1197 agreement-exists"
1198           Category="urn:oasis:names:tc:xacml:1.0:subject:attribute-category:access-
1199 subject"resource"
1200           Data Type="http://www.w3.org/2001/XMLSchema#stringboolean"
1201           MustBePresent="false"/>
1202         </Match>
1203         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
1204           <AttributeValue Data Type="http://www.w3.org/2001/XMLSchema#anyURI"
1205           >urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
1206 relationship:supplier</AttributeValue>
1207           <AttributeDesignator
1208 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
1209 relationship"
1210           Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
1211           Data Type="http://www.w3.org/2001/XMLSchema#anyURI"
1212           MustBePresent="false"/>
1213         </Match>
1214         <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
1215           <AttributeValue Data Type="http://www.w3.org/2001/XMLSchema#anyURI"
1216           >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-data-
1217 grant</AttributeValue>
1218           <AttributeDesignator
1219 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
1220           Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1221           Data Type="http://www.w3.org/2001/XMLSchema#anyURI"
1222           MustBePresent="false"/>
1223         </Match>
1224       </AllOf>
1225     </AnyOf>
1226 </Target>
1227 <Condition>
1228   <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:andstring-equal">
1229     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
1230       <AttributeValue Data Type="http://www.w3.org/2001/XMLSchema#string"
1231       >Wiley Corp</AttributeValue>
1232       <AttributeDesignator
1233 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
1234           Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1235           Data Type="http://www.w3.org/2001/XMLSchema#string"
1236           MustBePresent="false"/>
1237     </Apply>
1238     <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
1239       <AttributeDesignator
1240 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
1241           Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
1242           Data Type="http://www.w3.org/2001/XMLSchema#string"
1243           MustBePresent="false"/>
1244     </Apply>
1245   </Apply>
1246 </Condition>
1247 </Rule>
1248 </Policy>
1249 </PolicySet>
1250 </xacml:PolicySet>
1251 </xacml:PolicySet>
1252 </xacml:PolicySet>
1253 </xacml:PolicySet>
1254 </xacml:PolicySet>
1255 </xacml:PolicySet>

```

```

1256 <AttributeDesignator
1257 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
1258 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string
1259 >CRL03</AttributeValue>
1260 <Apply
1261 FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
1262 <AttributeDesignator
1263 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-id"
1264 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1265 DataType="http://www.w3.org/2001/XMLSchema#string"
1266 MustBePresent="false"/>
1267 </Apply>
1268 </Apply>
1269 </Apply>
1270 <Apply
1271 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-greater-than-or-equal">
1272 <Apply
1273 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1274 <AttributeDesignator
1275 AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
1276 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
1277 DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1278 MustBePresent="false"/>
1279 </Apply>
1280 <Apply
1281 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1282 <AttributeDesignator
1283 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
1284 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1285 DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1286 MustBePresent="false"/>
1287 </Apply>
1288 </Apply>
1289 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-less-than">
1290 <Apply
1291 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1292 <AttributeDesignator
1293 AttributeId="urn:oasis:names:tc:xacml:1.0:environment:current-dateTime"
1294 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:environment"
1295 DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1296 MustBePresent="false"/>
1297 </Apply>
1298 <Apply
1299 FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
1300 <AttributeDesignator
1301 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
1302 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1303 DataType="http://www.w3.org/2001/XMLSchema#dateTime"
1304 MustBePresent="false"/>
1305 </Apply>
1306 </Apply>
1307 </Apply>
1308 </Condition>
1309 </Rule>
1310 <ObligationExpressions>
1311 <ObligationExpression
1312 ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
1313 FulfillOn="Permit">
1314 <AttributeAssignmentExpression
1315 AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
1316 <AttributeValue
1317 DataType="http://www.w3.org/2001/XMLSchema#string">"http://www.w3.org/2001/XMLSchema#string"
1318 </AttributeValue>
1319 >Acme Proprietary Information: Limited Distribution</AttributeValue>
1320 </AttributeAssignmentExpression>
1321 </ObligationExpression>
1322 <ObligationExpression
1323 ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
1324 FulfillOn="Permit">
1325 </ObligationExpression>
1326 </ObligationExpressions>
1327 </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- <del>designee</del> <u>licensee</u>	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
<u>urn:oasis:names:tc:xacml:3.0:ipc:resource:valid-agreement-exists</u>	<u>O</u>
<u>urn:oasis:names:tc:xacml:3.0:ipc:resource:number-of-valid-agreements</u>	<u>O</u>
<u>urn:oasis:names:tc:xacml:3.0:ipc:resource:work-effort</u>	<u>M</u>
<u>urn:oasis:names:tc:xacml:3.0:ipc:resource:authorized-end-use</u>	<u>M</u>
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: <del>organization</del> <u>subject-id</u>	M
urn:oasis:names:tc:xacml:3.0:ipc:subject: <del>organizational-relationship</del> <u>organization</u>	M
urn:oasis:names:tc:xacml:3.0:ipc:subject: <u>subject-to</u> -organization- <del>type</del> <u>relationship</u>	M
urn:oasis:names:tc:xacml:3.0:ipc:subject: <del>affiliation-type</del> <u>business-context</u>	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:

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---

## 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.
<a href="#">WD9</a>	<a href="#">12/13/2012</a>	<a href="#">John Tolbert, Richard Hill, Crystal Hayes, Erik Rissanen, Steven Legg, Jean-Paul Buu-Sau</a>	<a href="#">Changed "organizational-relationship" to "subject-to-organization-relationship".</a> <a href="#">Changed "affiliation-type" to "business-context".</a> <a href="#">Added Subject-ID, Valid-Agreement-Exists, Number-of-valid-agreements, Authorized-end-use, and Work-effort. Updated examples.</a>

1364