



XACML Intellectual Property Control (IPC) Profile Version 1.0

Committee Specification Draft 03 /
Public Review Draft 03

17 May 2012

Specification URIs

This version:

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csprd03/xacml-3.0-ipc-v1.0-csprd03-en.doc>
(Authoritative)
<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csprd03/xacml-3.0-ipc-v1.0-csprd03-en.html>
<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csprd03/xacml-3.0-ipc-v1.0-csprd03-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>
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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>.

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.

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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 / Public Review Draft 03.

<http://docs.oasis-open.org/xacml/3.0/ipc/v1.0/csprd03/xacml-3.0-ipc-v1.0-csprd03-en.html>.

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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.

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

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

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

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

70 1.1 Glossary

71 Affiliation type

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

79 Agreement identifier

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

82 Agreement type

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

88 Copyright

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

93 Covered resource

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

96 Covered subject

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

100 **Effective date**

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

103 **Expiration date**

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

105 **IP-Designee**

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

108 **IP-Owner**

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

110 **Marking**

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

113 **Organization**

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

115 **Organizational-Relationship**

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

119 **Organization-Type**

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

122 **Patent**

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

125 **Proprietary**

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

129 **Public domain**

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

132 **Third-party proprietary**

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

136 **Trademark**

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

141 **Trade secret**

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

146 1.2 Terminology

147 The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD
148 NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described
149 in [RFC2119].

150 1.3 Normative References

- 151 [RFC2119] S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*,
152 <http://www.ietf.org/rfc/rfc2119.txt>, IETF RFC 2119, March 1997.
153
- 154 [XACML3] OASIS Standard, "eXtensible Access Control Markup Language (XACML)
155 Version 3.0", April 2010. <http://docs.oasis-open.org/xacml/3.0/xacml-3.0-core-spec-en.doc>
156
- 157
- 158 [XACML2] OASIS Standard, "eXtensible Access Control Markup Language (XACML)
159 Version 2.0", February 2005. http://docs.oasis-open.org/xacml/2.0/access_control-xacml-2.0-core-spec-os.pdf
160
- 161
- 162 [XACML1] OASIS Standard, "eXtensible Access Control Markup Language (XACML)
163 Version 1.0", February 2003. <http://www.oasis-open.org/committees/download.php/2406/oasis-xacml-1.0.pdf>
164
165

166 1.4 Non-Normative References

- 167 [XACMLIntro] OASIS XACML TC, *A Brief Introduction to XACML*, 14 March 2003,
168 http://www.oasis-open.org/committees/download.php/2713/Brief_Introduction_to_XACML.html
169
- 170
- 171 [ISO3166] ISO 3166 Maintenance agency (ISO 3166/MA),
172 http://www.iso.org/iso/country_codes.htm
- 173 [DublinCore] Dublin Core Metadata Element Set, version 1.1.
174 <http://dublincore.org/documents/dces/>

175 1.5 Scope

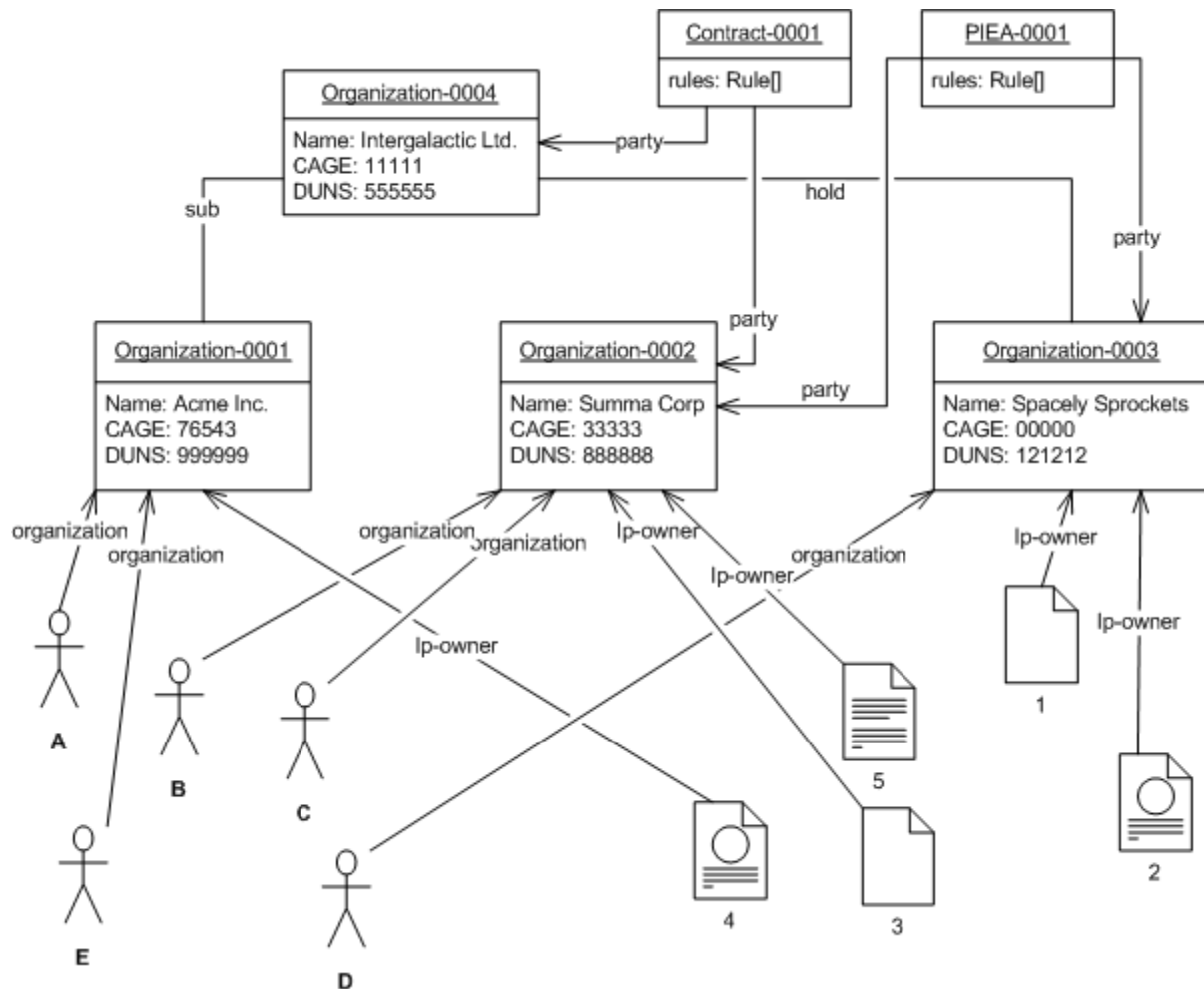
176 Many intellectual property access control decisions can be made on the basis of the resource's
177 **copyright, trademark, patent, proprietary (trade secret)**, or other classification. This profile defines
178 standard XACML attributes for these properties, and recommends the use of standardized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

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

182 1.6 Use cases

183 PDPs (Policy Decision Points) may need to consider intellectual property protection schemes when
184 evaluating authorization decisions. This profile is designed to provide a framework of additional
185 <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
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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.

220 2 Profile

221 2.1 Resource Attributes

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

228 2.1.1 Copyright

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

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

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

233 2.1.2 Patent

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

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

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

238 2.1.3 Proprietary

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

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

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

243 2.1.4 Public-Domain

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

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

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

248 2.1.5 Trademark

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

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

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

253 2.1.6 IP-Owner

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

255 `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:

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

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

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

307

308 2.1.11 Expiration-Date

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

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

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

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

315

316 2.2 Subject Attributes

317 2.2.1 Organization

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

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

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

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

326 2.2.2 Organization-Type

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

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

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

331 Recommended URN values for this attribute are:

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

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

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

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

337 2.2.3 Organizational-Relationship

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

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

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

343 Recommended URN values for this attribute are:

```
344 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
345 relationship:customer  
346 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
347 relationship:supplier  
348 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
349 relationship:partner  
350 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
351 relationship:primary-contractor  
352 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
353 relationship:subcontractor  
354 urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-  
355 relationship:authorized-sublicensor
```

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

358 2.2.4 Affiliation-Type

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

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

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

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

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

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

371 2.2.5 Agreement-Id

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

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

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

376 2.3 Obligations

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

383 The obligation should conform to following structure:

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

385 2.3.1 Encrypt

386 The Encrypt obligation shall be designated with the following identifier:

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

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

392

393 The following is an example of the Encrypt obligation:

```
394 <ObligationExpressions>  
395   <ObligationExpression  
396     ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"  
397     FulfillOn="Permit"/>  
398   </ObligationExpression>  
399 </ObligationExpressions>
```

400 2.3.2 Marking

401 Marking classification values shall be designated with the following identifier:

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

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

409

410 The following is an example of the marking obligation:

```
411 <ObligationExpressions>  
412   <ObligationExpression  
413     ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"  
414     FulfillOn="Permit">  
415     <AttributeAssignmentExpression  
416       AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">  
417       <AttributeValue  
418         AttributeId="urn:oasis:names:tc:xacml:2.0:example:attribute:text"  
419         DataType="http://www.w3.org/2001/XMLSchema#string"  
420         >Copyright 2011 Acme</AttributeValue>  
421       </AttributeAssignmentExpression>  
422     </ObligationExpression>  
423 </ObligationExpressions>
```

424 **3 Identifiers**

425 This profile defines the following URN identifiers.

426 **3.1 Profile Identifier**

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

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

430
431
432
433
434
435
436
437

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

438

4.1.1 Copyright Request

439
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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: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"
      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>
    <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>

```

504 4.1.2 Copyright Policy

505 This policy can be summarized as follows:

506

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

509

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

512 Subject organization = Wiley Corp AND

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

514 Resource ip-designee = Wiley Corp AND

515 "Date and Time" is in the range of effective-date and expiration-date

516 Then PERMIT

517

518 **Obligation:**

519 On PERMIT mark AND encrypt the resource.

520

```

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 FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
584 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
585 <AttributeDesignator
586 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
587 Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
588 DataType="http://www.w3.org/2001/XMLSchema#string"
589 MustBePresent="false"/>
590 </Apply>
591 <Apply FunctionId="urn:oasis:names:tc:xacml:1.0:function:string-one-and-only">
592 <AttributeDesignator
593

```

```

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

```

667 **4.2 Trademark**

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

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

671

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

672 **4.2.1 Trademark Request**

```

673 <Request ReturnPolicyIdList="true"
674   CombinedDecision="false"
675   xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
676   <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
677     <Attribute
678       AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
679       IncludeInResult="true">
680       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
681         >Wiley Foundation</AttributeValue>
682     </Attribute>
683     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type"
684       IncludeInResult="true">
685       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
686         >urn:oasis:names:tc:xacml:3.0:ipc:subject:affiliation-type:non-
687 profit</AttributeValue>
688     </Attribute>
689     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:agreement-id"
690       IncludeInResult="true">
691       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
692         >CR102</AttributeValue>
693     </Attribute>
694   </Attributes>
695   <Attributes Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource">
696     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:trademark"
697       IncludeInResult="true">
698       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
699         >true</AttributeValue>
700     </Attribute>
701     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
702       IncludeInResult="true">
703       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
704         >Acme</AttributeValue>
705     </Attribute>
706     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-designee"
707       IncludeInResult="true">
708       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
709         >Wiley Corp</AttributeValue>
710     </Attribute>
711     <Attribute AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
712       IncludeInResult="true">
713       <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
714         >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:trademark-
715 grant</AttributeValue>
716     </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>

```

734 4.2.2 Trademark Policy

735 This policy can be summarized as follows:

736

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

738

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

740 Then if

741 Subject agreement-id = Resource agreement-id (CR102, in this case) AND

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

743 PERMIT

744

745 **Obligation:**

746 On PERMIT mark the resource.

747

```

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         <Apply
833           FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
834           <AttributeDesignator
835             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:effective-date"
836             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
837             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
838             MustBePresent="false"/>
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>

```



```

850         FunctionId="urn:oasis:names:tc:xacml:1.0:function:dateTime-one-and-only">
851         <AttributeDesignator
852             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:expiration-date"
853             Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
854             DataType="http://www.w3.org/2001/XMLSchema#dateTime"
855             MustBePresent="false"/>
856         </Apply>
857     </Apply>
858 </Apply>
859 </Condition>
860 </Rule>
861 <ObligationExpressions>
862     <ObligationExpression
863         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:marking"
864         FulfillOn="Permit" >
865         <AttributeAssignmentExpression
866             AttributeId="urn:oasis:names:tc:xacml:3.0:example:attribute:text">
867             <AttributeValue DataType=http://www.w3.org/2001/XMLSchema#string
868                 >Acme</AttributeValue>
869             </AttributeAssignmentExpression>
870         </ObligationExpression>
871     </ObligationExpressions>
872 </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

```

880 <Request ReturnPolicyIdList="true"
881     CombinedDecision="false"
882     xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17">
883     <Attributes Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject">
884         <Attribute
885             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
886             IncludeInResult="true">
887             <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
888                 >Wiley Corp</AttributeValue>
889             </Attribute>
890         <Attribute
891             AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-relationship"
892             IncludeInResult="true">
893             <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
894                 >urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
895             relationship:supplier</AttributeValue>
896             </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>

```

944

945 4.3.2 Proprietary Policy

946 This policy can be summarized as follows:

947

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

949

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

951 organizational-relationship = supplier AND

952 Resource agreement-type = technical-data-grant

953

954 Then if

955 Resource ip-designee = Wiley Corp AND

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

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

958 Then PERMIT

959

960 **Obligation:**

961 On PERMIT mark AND encrypt the resource.

962

```
963 <Policy xmlns="urn:oasis:names:tc:xacml:3.0:core:schema:wd-17"
964 PolicyId="proprietary-approve"
965 RuleCombiningAlgId="urn:oasis:names:tc:xacml:1.0:rule-combining-algorithm:deny-
966 overrides"
967 Version="1">
968 <Description>Example rights to use proprietary (trade secret) material</Description>
969 <Target>
970 <AnyOf>
971 <AllOf>
972 <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:boolean-equal">
973 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#boolean"
974 >true</AttributeValue>
975 <AttributeDesignator
976 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:proprietary"
977 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
978 DataType="http://www.w3.org/2001/XMLSchema#boolean"
979 MustBePresent="false"/>
980 </Match>
981 <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
982 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
983 >Acme</AttributeValue>
984 <AttributeDesignator
985 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:ip-owner"
986 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
987 DataType="http://www.w3.org/2001/XMLSchema#string"
988 MustBePresent="false"/>
989 </Match>
990 </AllOf>
991 </AnyOf>
992 </Target>
993 <Rule Effect="Permit" RuleId="Rights to use match">
994 <Description>Allow if ip owner grants right to use technical data</Description>
995 <Target>
996 <AnyOf>
997 <AllOf>
998 <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:string-equal">
999 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#string"
1000 >Wiley Corp</AttributeValue>
1001 <AttributeDesignator
1002 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organization"
1003 Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
1004 DataType="http://www.w3.org/2001/XMLSchema#string"
1005 MustBePresent="false"/>
1006 </Match>
1007 <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
1008 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
1009 >urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
1010 relationship:supplier</AttributeValue>
1011 <AttributeDesignator
1012 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:subject:organizational-
1013 relationship"
1014 Category="urn:oasis:names:tc:xacml:1.0:subject-category:access-subject"
1015 DataType="http://www.w3.org/2001/XMLSchema#anyURI"
1016 MustBePresent="false"/>
1017 </Match>
1018 <Match MatchId="urn:oasis:names:tc:xacml:1.0:function:anyURI-equal">
1019 <AttributeValue DataType="http://www.w3.org/2001/XMLSchema#anyURI"
1020 >urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type:technical-data-
1021 grant</AttributeValue>
1022 <AttributeDesignator
1023 AttributeId="urn:oasis:names:tc:xacml:3.0:ipc:resource:agreement-type"
1024 Category="urn:oasis:names:tc:xacml:3.0:attribute-category:resource"
1025 DataType="http://www.w3.org/2001/XMLSchema#anyURI"
1026 MustBePresent="false"/>
```

```

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         </AttributeAssignmentExpression>
1121     </ObligationExpression>
1122     <ObligationExpression
1123         ObligationId="urn:oasis:names:tc:xacml:3.0:ipc:obligation:encrypt"
1124         FulfillOn="Permit">
1125     </ObligationExpression>
1126 </ObligationExpressions>
</Policy>
```

1127 5 Conformance

1128 Conformance to this profile is defined for *policies* and *requests* generated and transmitted within and
1129 between XACML systems.

1130 5.1 Attribute Identifiers

1131 Conformant XACML *policies* and *requests* SHALL use the attribute identifiers defined in Section 2 for
1132 their specified purpose, and SHALL NOT use any other identifiers for the purposes defined by attributes
1133 in this profile. The following table lists the attributes that must be supported.

1134 Note: “M” is mandatory “O” is optional.

1135

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

1136 **5.2 Attribute Values**

1137 Conformant XACML *policies* and *requests* SHALL use attribute values in the specified range or patterns
1138 as defined for each attribute in Section 2 (when a range or pattern is specified).

1139 NOTE: In order to process conformant XACML *policies* and *requests* correctly, *PIP* and
1140 *PEP* modules may have to translate native data values into the datatypes and formats
1141 specified in this profile.

1142 **Appendix A. Acknowledgements**

1143 The following individuals have participated in the creation of this specification and are gratefully
1144 acknowledged:

1145 **Participants:**

- 1146 John Tolbert, The Boeing Company
- 1147 Crystal Hayes, The Boeing Company
- 1148 Richard Hill, The Boeing Company
- 1149 Paul Tyson, Bell Helicopter Textron
- 1150 Danny Thorpe, Quest Software
- 1151 Remon Sinnema, EMC
- 1152 Andy Han, Nextlabs Inc
- 1153 Erik Rissanen, Axiomatics AB
- 1154 David Brossard, Axiomatics AB

1155 **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

1156

Appendix B. Non-Normative Text

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This table maps possible overlaps between IP type classifications. This list is neither normative nor

1158

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	-

1159

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.
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1162