



# SAML V2.0 Metadata Extensions for Login and Discovery User Interface Version 1.0

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### Technical Committee:

OASIS Security Services (SAML) TC

### Chairs:

Thomas Hardjono ([hardjono@mit.edu](mailto:hardjono@mit.edu)), M.I.T.

~~Nathan~~

~~Nate~~ Klingenstein ([ndk@internet2.edu](mailto:ndk@internet2.edu)), Internet2

### Editors:

Scott Cantor ([cantor.2@osu.edu](mailto:cantor.2@osu.edu)), Internet2

### Additional artifacts:

This prose specification is one component of a Work Product which also includes:

~~— XML schemas: [sstc-saml-metadata-ui-v1.0.xsd](#)~~

- [XML schema:](http://docs.oasis-open.org/security/saml/Post2.0/sstc-saml-metadata-ui/v1.0/csprd02/xsd/)  
<http://docs.oasis-open.org/security/saml/Post2.0/sstc-saml-metadata-ui/v1.0/csprd02/xsd/>

#### Related work:

[This specification defines extensions for use with:](#)

- *Metadata for the OASIS Security Assertion Markup Language (SAML) V2.0*. March 2005. OASIS Standard. <http://docs.oasis-open.org/security/saml/v2.0/saml-metadata-2.0-os.pdf>

#### Declared XML namespaces:

- urn:oasis:names:tc:SAML:metadata:ui

#### Abstract:

This document defines a set of extensions to SAML metadata that provide information necessary for user agents to present effective user interfaces and, in the case of identity provider discovery, recommend appropriate choices to the user.

#### Status:

This document was last revised or approved by the OASIS Security Services ([SAML](#)) 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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# 4.1 Introduction

SAML V2.0 metadata [**SAML2Meta**] provides a mechanism for expressing information necessary for SAML entities to successfully communicate with each other. However in most SAML profiles there is also a user agent involved, usually representing an actual person, that also participates in the profiled message exchanges. This document defines a set of extensions to metadata that provide information necessary for user agents to present effective user interfaces and, in the case of identity provider discovery, provide for recommendation of appropriate choices to the user. There are existing, though incomplete, metadata elements that carry some of this information, but existing practice around their use is inconsistent, and defining extensions with more well-defined semantics is less disruptive to existing metadata deployments.

## 4.1.1 Terminology and Notation

The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this specification are to be interpreted as described in IETF RFC 2119. These keywords are thus capitalized when used to unambiguously specify requirements over protocol and application features and behavior that affect the interoperability and security of implementations. When these words are not capitalized, they are meant in their natural-language sense.

Conventional XML namespace prefixes are used throughout the listings in this specification to stand for their respective namespaces as follows, whether or not a namespace declaration is present in the example:

Prefix	XML Namespace	Comments
md:	urn:oasis:names:tc:SAML:2.0:metadata	This is the SAML V2.0 metadata namespace defined in the SAML V2.0 metadata specification [ <b>SAML2Meta</b> ].
mdui:	urn:oasis:names:tc:SAML:metadata:ui	This is the SAML V2.0 metadata extension namespace defined by this document and its accompanying schema.
xsd:	http://www.w3.org/2001/XMLSchema	This namespace is defined in the W3C XML Schema specification [ <b>Schema1</b> ]. In schema listings, this is the default namespace and no prefix is shown.

This specification uses the following typographical conventions in text: `<ns:Element>`, Attribute, **Datatype**, OtherCode.

This specification uses the following typographical conventions in XML listings:

Listings of XML schemas appear like this.

Listings of XML examples appear like this. These listings are non-normative.

## 4.2.1.2 Normative References

- [**RFC2119**] S. Bradner. *Key words for use in RFCs to Indicate Requirement Levels*. IETF RFC 2119, March 1997. <http://www.ietf.org/rfc/rfc2119.txt>
- [**RFC4632**] V. Fuller et al. *Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan*. IETF RFC 4632, August 2006. <http://www.ietf.org/rfc/rfc4632.txt>
- [**RFC5870**] A. Mayrhofer et al. *A Uniform Resource Identifier for Geographic Locations ('geo' URI)*. IETF RFC 5870, June 2010. <http://www.ietf.org/rfc/rfc5870.txt>
- [**SAML2Errata**] ~~OASIS Approved Errata, SAML V2.0 Errata, October, 1 December~~ 2009. [OASIS Approved Errata](http://docs.oasis-open.org/security/saml/v2.0/sstc-saml-approved-errata-2.0.pdf). <http://docs.oasis-open.org/security/saml/v2.0/sstc-saml-approved-errata-2.0.pdf>

39 | **[SAML2Meta]** ~~OASIS Standard~~, *Metadata for the OASIS Security Assertion Markup Language*  
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41 | [open.org/security/saml/v2.0/saml-metadata-2.0-os.pdf](http://docs.oasis-open.org/security/saml/v2.0/saml-metadata-2.0-os.pdf)  
42 | **[Schema1]** H. S. Thompson et al. XML Schema Part 1: Structures. World Wide Web  
43 | Consortium Recommendation, May 2001. [http://www.w3.org/TR/2001/REC-](http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/)  
44 | [xmlschema-1-20010502/](http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/)  
45 | **[Schema2]** Paul V. Biron, Ashok Malhotra. XML Schema Part 2: Datatypes. World  
46 | Wide Web Consortium Recommendation, May 2001.  
47 | <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>

## 22 Metadata Extensions for Login and Discovery User Interface

### 2.12.1 User Interface Information

The user interface extension elements are oriented towards the requirements of user agent presentation of entities represented by SAML metadata, typically as part of identity provider discovery or representing services requesting information from a user's identity provider. The specifics of such presentation and the use of the elements that follow is not in scope for this specification, but communities of use SHOULD establish guidelines and even prescriptive requirements to encourage consistency and understandability for users.

The `<mdui:UIInfo>` container element, defined below, MUST appear within the `<md:Extensions>` element of a role element (one whose type is based on `md:RoleDescriptorType`). The use of the `<mdui:UIInfo>` element, or any other element defined in this section, outside of that context is not defined by this specification.

This element, if it appears, MUST contain at least one child element.

Finally, this element MUST NOT appear more than once within a given `<md:Extensions>` element.

#### 2.1.12.1.1 Element `<mdui:UIInfo>`

The `<mdui:UIInfo>` element contains information which pertains to (but is not specifically limited to) the creation of user interfaces for tasks such as identity provider selection/discovery, user authentication, attribute release consent, etc.

This element contains any number of the following elements, in any order:

`<mdui:DisplayName>`

Localized-namesA localized name for the entity operating in the containing role.

`<mdui:Description>`

Localized-descriptionsA localized description of the entity operating in the containing role.

`<mdui:Keywords>`

Localized search keywords, tags, categories, or labels for the containing role.

`<mdui:Logo>`

LocalizedA localized logo graphicimage for the entity operating in the containing role.

`<mdui:InformationURL>`

URLsA URL to localized information about the entity operating in the containing role.

`<mdui:PrivacyStatementURL>`

URLsA URL to localized information about the privacy practices of the entity operating in the containing role.

In addition, this element MAY contain an arbitrary number of extension elements from other namespaces, the definitions/semantics of which must be supplied elsewhere.

The schema for the `<mdui:UIInfo>` element, and its corresponding `mdui:UIInfoType` complex type, is as follows:

```
<element name="UIInfo" type="mdui:UIInfoType"/>
<complexType name="UIInfoType">
  <choice minOccurs="0" maxOccurs="unbounded">
    <element ref="mdui:DisplayName"/>
    <element ref="mdui:Description"/>
    <element ref="mdui:Keywords"/>
    <element ref="mdui:Logo"/>
    <element ref="mdui:InformationURL"/>
    <element ref="mdui:PrivacyStatementURL"/>
    <any namespace="##other" processContents="lax"/>
  </choice>
</complexType>
```

### 2.1.22.1.2 Element <mdui:DisplayName>

The <mdui:DisplayName> element specifies a **set of** localized names fit for display to users. Such names are meant to allow a user to distinguish and identify the entity acting in a particular role. The content of this element should be suitable for use in constructing accessible user interfaces for those with disabilities.

There **MUST NOT** be more than one <mdui:DisplayName> element with the same `xml:lang` attribute value within a single role descriptor.

The schema for the <mdui:DisplayName> element is as follows:

```
<element name="DisplayName" type="md:localizedNameType"/>
```

### 2.1.32.1.3 Element <mdui:Description>

The <mdui:Description> element specifies a brief, localized description fit for display to users. In the case of an <md:SPSSODescriptor> role, this **SHOULD** be a description of the service being offered. In the case of an <md:IDPSSODescriptor> role this **SHOULD** **beinclude** a description of the user community serviced.

In all cases this text **MUST** be standalone, meaning it is not to be used as a template requiring additional text (e.g., "This service offers \$description").

There **MUST NOT** be more than one <mdui:Description> element with the same `xml:lang` attribute value within a single role descriptor.

The schema for the <mdui:Description> element is as follows:

```
<element name="Description" type="md:localizedNameType"/>
```

### 2.1.42.1.4 Element <mdui:Keywords>

The <mdui:Keywords> element specifies a list of localized search keywords, tags, categories, or labels that apply to the containing role. This element extends the **mdui:listOfStrings** schema type with the following attribute:

`xml:lang` [Required]  
Language specifier.

The content of this element is a "list" of strings in the XML Schema [**Schema2**] sense, which means the keyword strings are space-delimited. Spaces within individual keywords are encoded with a "plus" (+) character; as a consequence, keywords may not contain that character.

There **MUST NOT** be more than one <mdui:Keywords> element with the same `xml:lang` attribute value within a single role descriptor.

The schema for the <mdui:Keywords> element, and its corresponding **mdui:KeywordsType** complex type, is as follows:

```
<element name="Keywords" type="mdui:KeywordsType"/>
<complexType name="KeywordsType">
  <simpleContent>
    <extension base="mdui:listOfStrings">
      <attribute ref="xml:lang" use="required"/>
    </extension>
  </simpleContent>
</complexType>
<simpleType name="listOfStrings">
  <list itemType="string"/>
</simpleType>
```

### 2.1.52.1.5 Element <mdui:Logo>

The <mdui:Logo> element specifies the external location of a localized logo fit for display to users. This element extends the **anyURI** schema type with the following attributes:

`height` [Required]  
The **rendered** height of the logo measured in pixels.

`width` [Required]  
The **rendered** width of the logo measured in pixels.



148 `xml:lang`  
149 Optional language specifier.

150 In order to facilitate the usage of logos within a user interface, logos SHOULD:

- 151 • use a transparent background where appropriate
- 152 • use PNG, or GIF (less preferred), images
- 153 • use HTTPS URLs in order to avoid mixed-content warnings within browsers

154 The order of logo elements is not significant, and a consumer MAY select any logo that meets its presentation and internationalization requirements. Communities of use SHOULD establish guidelines or requirements for logo size, aspect ratio, etc. to ensure consistency. If logos without an `xml:lang` attribute are present, then they SHOULD be considered the default logos for use when logos in the user's preferred language are not available.

159 Note that while vector graphic formats may be renderable at many sizes, the height and width attributes remain mandatory to allow consumers that lack intelligence regarding image processing to locate images suitable for particular sizes. The same image MAY be specified with multiple sizes when appropriate.

163 The schema for the `<mdui:Logo>` element, and its corresponding **mdui:LogoType** complex type, is as follows:

```
165 <element name="Logo" type="mdui:LogoType"/>
166 <complexType name="LogoType">
167   <simpleContent>
168     <extension base="anyURI">
169       <attribute name="height" type="positiveInteger" use="required"/>
170       <attribute name="width" type="positiveInteger" use="required"/>
171       <attribute ref="xml:lang"/>
172     </extension>
173   </simpleContent>
174 </complexType>
```

### 175 **2.1.62.1.6 Element `<mdui:InformationURL>`**

176 The `<mdui:InformationURL>` specifies an external location for localized information about the entity acting in a given role meant to be viewed by users. The content found at the URL SHOULD provide more complete information than what would be provided by the `<mdui:Description>` element.

178 There MUST NOT be more than one `<mdui:InformationURL>` element with the same `xml:lang` attribute value within a single role descriptor.

181 The schema for the `<mdui:InformationURL>` element is as follows:

```
182 <element name="InformationURL" type="md:localizedURIType"/>
```

### 183 **2.1.72.1.7 Element `<mdui:PrivacyStatementURL>`**

184 The `<mdui:PrivacyStatementURL>` specifies an external location for localized privacy statements. Such statements are meant to provide a user with information about how information will be used and managed by the entity acting in a given role.

187 There MUST NOT be more than one `<mdui:PrivacyStatementURL>` element with the same `xml:lang` attribute value within a single role descriptor.

189 The schema for the `<mdui:PrivacyStatementURL>` element is as follows:

```
190 <element name="PrivacyStatementURL" type="md:localizedURIType"/>
```

## 191 **2.22.2 Discovery Hinting Information**

192 The discovery hinting extension elements provide information which may hint that hints at the identity provider with which a user is associated. A server-side selection mechanism could leverage such hints in conjunction with client-supplied information to adjust likely choices.

195 Information provided by the content of this element is meant only as a hint and SHOULD NOT be used to definitively select an identity provider without user intervention or confirmation. As a consequence, hints are inappropriate to use in conjunction with discovery protocols or protocol features that would prevent user interaction.

199 The <mdui:DiscoHints> container element, defined below, MUST appear within the  
200 <md:Extensions> element of an <md:IDPSODescriptor> element. The use of the  
201 <mdui:DiscoHints> element, or any other element defined in this section, outside of that context is not  
202 defined by this specification.  
203 This element, if it appears, MUST contain at least one child element.  
204 Finally, this element MUST NOT appear more than once within a given <md:Extensions> element.

### 205 **2.2.42.2.1** Element <mdui:DiscoHints>

206 The <mdui:DiscoHints> element contains information which that may be used by an identity provider  
207 selection/discovery service as hints in determining with which identity provider(s) the user may be associ-  
208 ated.

209 This element contains any number of the following elements, in any order:

210 <mdui:IPHint>

211 IP address blocks associated with, or serviced by, the entity operating in the containing role.

212 <mdui:DomainHint>

213 DNS domain names associated with, or serviced by, the entity operating in the containing role.

214 <mdui:GeolocationHint>

215 Geographic coordinates associated with, or serviced by, the entity operating in the containing  
216 role.

217 In addition, this element MAY contain an arbitrary number of extension elements from other namespaces,  
218 the definitions/semantics of which must be supplied elsewhere.

219 The schema for the <mdui:DiscoHints> element, and its corresponding **mdui:DiscoHintsType** com-  
220 plex type, is as follows:

```
221 <element name="DiscoHints" type="mdui:DiscoHintsType"/>  
222 <complexType name="DiscoHintsType">  
223   <choice minOccurs="0" maxOccurs="unbounded">  
224     <element ref="mdui:IPHint"/>  
225     <element ref="mdui:DomainHint"/>  
226     <element ref="mdui:GeolocationHint"/>  
227     <any namespace="##other" processContents="lax"/>  
228   </choice>  
229 </complexType>
```

### 230 **2.2.22.2.2** Element <mdui:IPHint>

231 The <mdui:IPHint> element specifies an [RFC4632] block associated with, or serviced by, the entity.  
232 Both IPv4 and IPv6 CIDR blocks MUST be supported.

233 The schema for the <mdui:IPHint> element is as follows:

```
234 <element name="IPHint" type="string"/>
```

### 235 **2.2.32.2.3** Element <mdui:DomainHint>

236 The <mdui:DomainHint> element specifies a DNS domain associated with, or serviced by, the entity.

237 The schema for the <mdui:DomainHint> element is as follows:

```
238 <element name="DomainHint" type="string"/>
```

### 239 **2.2.42.2.4** Element <mdui:GeolocationHint>

240 The <mdui:GeolocationHint> element specifies a set of geographic coordinates associated with, or  
241 serviced by, the entity. Coordinates are given in URI form using the geo URI scheme [RFC5870].

242 The schema for the <mdui:GeolocationHint> element is as follows:

```
243 <element name="GeolocationHint" type="anyURI"/>
```

### 244 **2.32.3 Security Considerations**

245 The information contained in these extensions, as well as the content identified by various URLs, is in-  
246 tended for the construction of user interfaces. As such, special consideration by implementers and de-  
247 ployers is warranted.

248 Any URLs MUST be carefully sanitized and encoded to protect against cross-site scripting and related  
249 vulnerabilities. Schemes other than "https", "http", or "data" SHOULD NOT be used.

250 Since it is generally impractical to guarantee the continued safety of content behind a particular URL, the  
251 use of "https" URLs is RECOMMENDED, and control over the URLs in question must be carefully estab-  
252 lished by the publisher of metadata containing these extensions. Consumers of metadata using these  
253 extensions to construct UIs must ensure the provenance of metadata and that the processes by which the  
254 extensions are managed by the publisher are sufficiently sound.

255 This is particularly relevant for the `<mdui:Logo>` element, since such URLs are often dereferenced by  
256 the user agent without intervention. Where practical, the use of server-side image processing may ena-  
257 ble a higher degree of safety and control over the presentation of images than direct embedding of links  
258 to logos.

### 259 **2.42.4 Relationship with Existing Metadata Elements**

#### 260 **2.4.12.4.1 <md:Organization> Elements**

261 SAML metadata defines localized organizational names, display names, and URLs at both the entity and  
262 role level. These elements are meant to reflect information about the organization that "owns" or operates  
263 a particular entity. To date, most known identity provider discovery interfaces have relied on entity-level  
264 `<md:OrganizationDisplayName>` element content. Some applications will also display the organiza-  
265 tion name for service providers as a means of identifying the service.

266 However, such usage is based on two implicit assumptions:

- 267 • the organization name is recognizable and can be understood by the user within the context that  
268 it is used

- 269 • the organization only has one entity operating in a given role at any specific time

270 There are many cases, however, where one or both of these assumption are not true. An example con-  
271 flicting with the first assumption may be Virginia Polytechnic Institute and State University, which the  
272 world knows as "Virginia Tech". An example that conflicts with both assumptions might be a third-party  
273 hosting service. Its name would not be recognized by any user and it could operate many entities at any  
274 given time.

275 However, the organizational display name may still be useful, for example within "owned by..." or "operat-  
276 ed by..." statements.

#### 277 **2.4.22.4.2 Service Name and Description**

278 Entities with a `<md:SPSSODescriptor>` role may optionally include one or more

279 `<md:AttributeConsumingService>` elements which in turn contain `<md:ServiceName>` and

280 `<md:ServiceDescription>` elements. These elements are normally used to expose the attribute re-  
281 quirements for various service "levels" and to associate certain names and descriptions with them.

282 The following issues make these elements inappropriate for carrying a general display name and descrip-  
283 tion for the service:

- 284 • other role elements have no analogous elements
- 285 • some services do not require attributes, but the `<md:AttributeConsumingService>` element  
286 requires the inclusion of one or more `<md:RequestedAttribute>` elements
- 287 • **the one** typical usage for these elements may not convey a name and description for the service  
288 itself, **but rather for some aspect of the service (e.g., a service level, or a type of access)**

#### 289 **2.4.32.4.3 Suggested Precedence**

290 Implementations that rely on display name information SHOULD rely on elements in the following order of  
291 preference:

- 292 • `<mdui:DisplayName>`
- 293 • `<md:ServiceName>` (if applicable)
- 294 • `entityID` or a hostname associated with the endpoint of the service

295 As a consequence, entities may rely on the existing <md:ServiceName> (or where appropriate the  
296 <md:ServiceDescription>) element by omitting the <mdui:DisplayName> (or  
297 <mdui:Description>) element from their metadata.  
298 Note that when multiple <md:AttributeConsumingService> elements are used, some identity or  
299 discovery protocols may lack the ability to signal which of the multiple elements is relevant to a request. In  
300 such deployments, limiting the cardinality to a single element or requiring the use of the  
301 <mdui:DisplayName> element may be necessary.  
302 Implementations MAY support the use of <md:OrganizationDisplayName>, particularly as a migra-  
303 tion strategy, but this is not recommend this as a general practice.

## 304 **2-52.5 Example**

305 An elided example follows.

```
306 <EntityDescriptor entityID="https://idp.switch.ch/idp/shibboleth"
307     xmlns="urn:oasis:names:tc:SAML:2.0:metadata"
308     xmlns:mdui="urn:oasis:names:tc:SAML:metadata:ui">
309
310   <IDPSSODescriptor
311     protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
312     <Extensions>
313       <mdui:UIInfo>
314
315         <mdui:DisplayName xml:lang="en">SWITCH</mdui:DisplayName>
316         <mdui:DisplayName xml:lang="de">SWITCH</mdui:DisplayName>
317
318         <mdui:Description xml:lang="en">
319           Switzerland's national research and education network.
320         </mdui:Description>
321         <mdui:Description xml:lang="de">
322           Das schweizerische Hochschul- und Forschungsnetzwerk.
323         </mdui:Description>
324
325         <mdui:Logo height="16" width="16">
326           https://switch.ch/resources/images/smalllogo.png
327         </mdui:Logo>
328         <mdui:Logo height="97" width="172">
329           https://switch.ch/resources/images/logo.png
330         </mdui:Logo>
331
332         <mdui:InformationURL xml:lang="en">
333           http://switch.ch
334         </mdui:InformationURL>
335         <mdui:InformationURL xml:lang="de">
336           http://switch.ch/de
337         </mdui:InformationURL>
338
339       </mdui:UIInfo>
340
341       <mdui:DiscoHints>
342
343         <mdui:IPHint>130.59.0.0/16</mdui:IPHint>
344         <mdui:IPHint>2001:620::0/96</mdui:IPHint>
345
346         <mdui:DomainHint>switch.ch</mdui:DomainHint>
347
348         <mdui:GeolocationHint>geo:47.37328,8.531126</mdui:GeolocationHint>
349
350       </mdui:DiscoHints>
351     </Extensions>
352
353     <!-- other role-level elements -->
354   </IDPSSODescriptor>
355 </EntityDescriptor>
```

## 33 Conformance

### 3.13.1 SAML V2.0 Metadata Extensions for Login and Discovery User Interface Version 1.0

A metadata producer conforms to this profile if it has the ability to produce metadata in accordance with sections 2.1 and 2.2.

A metadata consumer conforms to this profile if it can consume extended metadata produced in accordance with sections 2.1 and 2.2.

An identity provider discovery service or agent conforms to this profile if it has the ability to consume and utilize extended metadata produced in accordance with sections 2.1, 2.2, and 2.4.3.

## Appendix A Acknowledgments

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## Appendix A Revision History

Working Draft 10:

- [Address public comments from](http://wiki.oasis-open.org/security/PublicComments20111014-20111113) <http://wiki.oasis-open.org/security/PublicComments20111014-20111113>

Working Draft 09:

- Clarify lack of support for '+' in keywords
- s/then/than

Working Draft 08:

- Fix namespace in example

Working Draft 07:

- Remove normative reference to schema (can't be kept current with document process)
- Allow for spaces in keywords using '+' escape
- Add security considerations section
- Add TC member list

Working Draft 06:

- Add <Keywords> element as a search "catch-all"

Working Draft 05:

- Fix typo
- Reword "languageless logo" text and move together with other logo use guideline text

Working Draft 04:

- Migrated text to new OASIS template and filename
- Removed specific logo guidance in favor of generic advice
- Added fallback option to hostnames in addition to entityID
- Better guidance on intended use of elements and scope of specification

- 404 Working Draft 03:
- 405 • Fixed namespace in section 1 table
  - 406 • Add limit on one wrapper element per Extensions block
  - 407 • Improve example to reflect guidance in spec
  - 408 • Add note about accessibility to DisplayName
- 409 Working Draft 02:
- 410 • Fixed missing wildcard in schema
  - 411 • Corrected some typos
  - 412 • Removed ODN from fallback precedence
- 413 Working Draft 01
- 414 • Initial OASIS submission
  - 415 • Removed SAML version number from namespace for consistency with other extensions
  - 416 • Various editorial rewording and combining of normative sections, externalized the schema.
  - 417 • Added conformance section
  - 418 • Changed base type of <Logo> to URI, and switched <GeolocationHint> to URI based on
- 419 RFC5870
- 420 • Added wildcards to wrapper elements, changed them to choice bags
- 421 Presubmission Changes:
- 422 Changes to Draft 03:
- 423 • Correct typo in DiscoHints schema; the 's' was missing from Hints
  - 424 • Add a couple examples where the assumptions noted in section 2.3.1 do not hold
  - 425 • Minor typographical corrections
- 426 Changes to Draft 02:
- 427 • Add SAML version number to declared namespace
  - 428 • Add <UIInfo> and <DiscoHints>
- 429 Changes to Draft 01:
- 430 • Move from the use of metadata entity attributes to direct XML elements located with in role <Ex-
  - 431 tensions> elements
  - 432 • Make `xml:lang` attribute on <Logo> elements optional with the lack of language indicating the
  - 433 default logo to use
  - 434 • Add <PrivacyStatementURL> element