



SOA-EERP Business Rating of Service Version 1.0

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Related work:

This specification is related to:

- SOA-EERP Business Service Level Agreement specification, Version 1.0, <http://docs.oasis-open.org/soa-eerp/sla/v1.0/SOA-EERP-BSLA-Specification.pdf>
- SOA-EERP Business Quality of Service, Version 1, <http://docs.oasis-open.org/soa-eerp/bqos/v1.0/SOA-EERP-bQoS-Specification.pdf>

This document is one of three closely related specifications, SOA-EERP Business Quality of Service (bQoS), SOA-EERP Rating and SOA-EERP Service Level Agreement which need to be understood in combination.

Declared XML Namespace(s):

<http://docs.oasis-open.org/ns/soa-eerp/rt/200903>

Abstract:

This document specifies the XML vocabulary for business rating, one of three Specifications for end-to-end resource planning (EERP). Business rating describes the business-related rating and credentials for a service.

Status:

This document was last revised or approved by the SOA-EERP TC on the above date. The level of approval is also listed above. Check the “Latest Version” or “Latest Approved Version” location noted above for possible later revisions of this document.

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1 Introduction

This document is the specification for Business Rating for End-to-End Resource Planning (EERP), an XML vocabulary for information exchange on business creditability, reliability and reputation of the service providers.

EERP applies service discovery, composition, simulation, and optimization techniques in a novel way to improve business results. It models the business process and the range of potential services, then guide the selection and deployment of services based on the end-to-end business value.

The creditability, reliability and reputation of the service need to be understood for estimating the overall business quality of the process that uses those services. The business rating characteristics of the service defined in this Business Rating specification will enable EERP to determine the varieties of optimization to be supported, and to select optimal end-to-end solution.

1.1 Terminology

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

1.1.1 Notational Conventions

This specification uses the following syntax to define outlines for detailed elements:

- The syntax appears as an XML instance, but values in italics indicate data types instead of literal values.
- Characters are appended to elements and attributes to indicate cardinality:
 - "?" (0 or 1)
 - "*" (0 or more)
 - "+" (1 or more)
- The character "|" is used to indicate a choice between alternatives.
- The characters "(" and ")" are used to indicate that contained items are to be treated as a group with respect to cardinality or choice.
- The characters "[" and "]" are used to call out references and property names.
- Ellipses (i.e., "...") indicate points of extensibility. Additional children and/or attributes MAY be added at the indicated extension points but MUST NOT contradict the semantics of the parent and/or owner, respectively. By default, if a receiver does not recognize an extension, the receiver SHOULD ignore the extension; exceptions to this processing rule, if any, are clearly indicated below.
- XML namespace prefixes (see Table 1) are used to indicate the namespace of the element being defined.

Elements and Attributes defined by this specification are referred to in the text of this document using XPath 1.0 expressions. Extensibility points are referred to using an extended version of this syntax:

- An element extensibility point is referred to using {any} in place of the element name. This indicates that any element name can be used, from any namespace other than the namespace of this specification.
- An attribute extensibility point is referred to using @{any} in place of the attribute name. This indicates that any attribute name can be used, from any namespace other than the namespace of this specification.

43 Extensibility points in the exemplar may not be described in the corresponding text.

44

45 1.2 Normative References

- 46 **[RFC2119]** S. Bradner, *Key words for use in RFCs to Indicate Requirement*
47 *Levels*, <http://www.ietf.org/rfc/rfc2119.txt>, IETF RFC 2119, March 1997.
48 <http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>
- 49 **[SOAP]** W3C Note, "SOAP: Simple Object Access Protocol 1.1", 08 May 2000.
50 <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>
- 51 **[SOAP12]** W3C Recommendation, "SOAP 1.2 Part 1: Messaging Framework", 24 June
52 2003.
53 <http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>
- 54 **[URI]** T. Berners-Lee, R. Fielding, L. Masinter, "Uniform Resource Identifiers (URI):
55 Generic Syntax", RFC 3986, MIT/LCS, Day Software, Adobe Systems, January
56 2005.
57 <http://www.ietf.org/rfc/rfc3986.txt>
- 58 **[UBL-20]** OASIS Standard, "Universal Business Language (UBL) v2.0", 12 December 2006
59 <http://docs.oasis-open.org/ubl/os-UBL-2.0/UBL-2.0.pdf>
- 60 **[UBL-20-cbc]** Universal Business Language (UBL) v2.0, Common Basic Components
61 <http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-2.0.xsd>
- 62 **[UBL-20-udt]** Universal Business Language (UBL) v2.0. Unqualified Data Type
63 <http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd>
- 64 **[XML-Schema1]** W3C Recommendation, "XML Schema Part 1: Structures Second Edition", 28
65 October 2004.
66 <http://www.w3.org/TR/2004/REC-xmlschema-1-20041028/>
- 67 **[XML-Schema2]** W3C Recommendation, "XML Schema Part 2: Datatypes Second Edition", 28
68 October 2004.
69 <http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/>
- 70 **[CEFACT]** CEFACT – Core components specifications - <http://webster.disa.org/cefact-groups/tmg/>
- 71
72
73

74 1.2.1 Reference

75 In this document reference is made to some basic elements and data types in UBL 2.0, in the following
76 schema:

- 77 • UBL 2.0 Common Basic Components (**UBL-20-cbc**), UBL-CommonBasicComponents-2.0.xsd
- 78 • UBL 2.0 Unqualified Data Type (UBL-20-udt), UnqualifiedDataTypeSchemaModule-2.0.xsd

79 This specification is designed to work with the general Web Services framework including WSDL service
80 descriptions, and **SOAP** message structure and message processing model. The XML vocabulary
81 defined in this specification should be applicable to any version of **SOAP**.

82 1.3 Non-Normative References

83 None.

84 2 Business Rating Measurement

85 The Business Rating of the XML vocabulary is defined in XML Schema format that has many rating
86 measurement indicators.

87 2.1 Namespaces

88 The XML namespace URI that MUST be used by implementations of this specification is:

89 `http://docs.oasis-open.org/ns/soa-eerp/rt/200903`

90 Table 1 lists XML namespaces that are used in this specification. The choice of any namespace prefix is
91 arbitrary and not semantically significant.

92 *Table 1: Prefixes and XML Namespaces used in this specification.*

Prefix	Namespace	Specification(s)
S	http://schemas.xmlsoap.org/soap/envelope/	[SOAP]
S12	http://www.w3.org/2003/05/soap-envelope	[SOAP12]
xsd	http://www.w3.org/2001/XMLSchema	[XML-Schema1], [XML-Schema2]
cbc	urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2	[UBL-20-cbc]
udt	urn:un:unece:uncefact:data:specification:UnqualifiedDataTypesSchemaModule:2	[UBL-20-udt] , [CEFACT]
ccts	urn:un:unece:uncefact:documentation:2	[UBL-20] , [CEFACT]
rt	http://docs.oasis-open.org/ns/soa-eerp/rt/200903	This specification

93 2.2 Schema Files

94 A normative copy of the XML Schema [XML-Schema1, XML-Schema2] description for this specification
95 can be retrieved from the following address:

96 `http://docs.oasis-open.org/soa-eerp/eerp-rating/200903/eerp-rating.xsd`

97 2.3 Rating Measurement Indicators

98 The BRating is the root element of Business Rating for EERP which is for business reliability and
99 reputation of the service and its services provider. It can have one or more of the following elements:

- 100 • ListOfRating element is for the rating aspect of service which is provided by third party and
101 measured in terms of rates for the service. Each Rating element in the ListOfRating element is
102 issued by a rating organization that has either an aggregated numeric number or an aggregated
103 classification description to represent the rating measurement of the given business service.
- 104 • Credentials element is for the rating aspect of service which is measured in terms of credentials
105 for the service that the service provider owns or holds. Credentials are issued by organizations for

106 the service, such as licenses, permissions, certifications, associations, affiliations, etc. Each
 107 credential element in the Credentials element is a non-aggregated indicator for the rating
 108 measurement of the given business service, and it does not provide an aggregated value for the
 109 measurement.

- 110 • Any additional elements for the rating aspect of service. This can be one or more elements of
 111 Performance:QualityAssesstionEvaluation that will provider a mechanism for Service
 112 Rating Entities to provide their evaluation for how well the Service Provider fulfill the
 113 Quality Assertion(s) of its service.

114 Both the ListOfRating and Credentials elements describe information about the given business service.
 115 They are not related however. The Rating element inside the ListOfRating must be issued by a third-party
 116 rating organization. The service provider cannot issue a Rating for itself, but can claim what kind of
 117 credentials it owns or holds in the Credential elements. The Rating element and Credential element
 118 cannot be mixed. A Business Rating document/message, with a root element of <rt:BRating>, can have
 119 either ListOfRating element or Credentials element, or both elements.

120 **Syntax**

```

121 <rt:BRating xmlns:rt="..." ...>
122 <rt:ListOfRating ...>rt:ListOfRatingType</rt:ListOfRating> ?
123 <rt:Credentials ...>rt:CredentialsType</rt:Credentials> ?
124 ...
125 </rt:BRating >
  
```

126 The following describes the attributes and elements listed in the schema outlined above:

127 /rt:BRating

128 The root element of Rating for EERP

129 /rt:BRating/{any}

130 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 131 to the element in the future. Unrecognized attributes MAY cause a fault or be silently ignore.

132 /rt:BRating/rt:ListOfRating

133 List of Rating, rating aspect of the service in BRating element, is to hold those Rating elements. It
 134 is an optional element and has one or many Rating elements, see Section 3 for more details.

135 /rt:BRating/rt:ListOfRating/{any}

136 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 137 to the ListOfRating element in the future. Unrecognized attributes MAY cause a fault or be silently
 138 ignore.

139 /rt:BRating/rt:Credentials

140 Credentials element is for credential aspect of the service in which the service provider has
 141 such as license, certification, affiliations, associations, etc. It is optional element and has one or
 142 many Credential elements, see Section 4 for more details.

143 /rt:BRating/rt:Credentials/{any}

144 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 145 to the Credentials element in the future. Unrecognized attributes MAY cause a fault or be silently
 146 ignore.

147 / rt:BRating /{any}

148 This is an extensibility mechanism to allow different (extensible) elements/parameters to be
 149 specified in the future. Unrecognized elements MAY cause a fault or be silently ignore. This can
 150 be one or more elements of /rt:BRaing/Performance/QualityAssesstionEvaluation for third-party
 151 Service Rating Entities to provide their evaluation for how well the Service Provider fulfill the
 152 Quality Assertion(s) of this service.

153 3 ListOfRating

154 The ListOfRating element contains the list of Rating issued by a third party rating organization. Each
155 Rating element in the ListOfRating has one of the following two elements to represent the rating
156 measurement of the given business service:

- 157 • An aggregated number, in <rt:RatingNumeric > element
- 158 • An aggregated classification description, in <rt:RatingDescription> element

159 There SHOULD be zero or one ListOfRating element present in the rating of service.

160 Syntax

```
161 <rt:ListOfRating xmlns:rt="..." ...>  
162   <rt:Rating Type="..." ... >rt:QualityRatingType  
163     <rt:RatingIssuer ...>rt:IssuerType  
164       <rt:IssuerName languageID="...">rt:IssuerNameType</rt:IssuerName> ?  
165       <rt:IssuerUri ...>rt:RatingUriType</rt:IssuerUri>  
166       ...  
167     </rt:RatingIssuer>  
168     <rt:RatingDescription languageID="..." ... >  
169       rt:RatingDescriptionType</rt:RatingDescription> ?  
170     <rt:RatingNumeric ...>rt:RatingNumericType</rt:RatingNumeric> ?  
171     <rt:RatingDate ...>rt:RatingDateType</rt:RatingDate> ?  
172     <rt:RatingReferenceUri ...>rt:RatingUriType</rt:RatingReferenceUri> ?  
173     ...  
174   </rt:Rating> +  
175 </rt:ListOfRating>
```

176 The following describes the attributes and elements listed in the schema outlined above:

177 /rt:BRating/rt:ListOfRating

178 List of ratings for a service that has one or more Rating elements.

179 /rt:BRating/rt:ListOfRating/rt:Rating

180 The Rating element represents a rating measurement of the given business service. The rating
181 measurement is issued by a third party rating organization. This is a required element for the
182 ListOfRating element.

183 /rt:BRating/rt:ListOfRating/rt:Rating/@Type

184 Type is an optional attribute of Simple Type to identify what kind of Rating element it is.

185 /rt:BRating/rt:ListOfRating/rt:Rating/@{any}

186 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
187 to the ListOfRating element in the future. Unrecognized attributes MAY cause a fault or be silently
188 ignore.

189 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer

190 Issuing organization for this rating includes the issuer name and the URI in the Element. This
191 element is to represent the rating issuer organization. It is a required element for Rating.

192 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerName

193 IssuerName element, Name for the issuing organization for this rating, is an optional element for
194 RatingIssuer.

195 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerName/@languageID

196 Language ID is a required attribute in the IssuerName element, using xsd:language type. The
197 value can be those defined in urn:un:unece:unefact:odelist:specification:5639:1988.

198 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerUri
 199 It is the URI that represent the issuer organization. It is a required element for RatingIssuer.

200 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerUri/@{any}
 201 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 202 to the IssuerUri element in the future. Unrecognized attributes MAY cause a fault or be silently
 203 ignore.

204 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription
 205 Rating description for the rating where the rating can be represented in String format, such as
 206 Good, Fair, Average, etc. It is an optional element for Rating.

207 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription/@languageID
 208 Language ID is a required attribute in the RatingDescription element, using xsd:language type.
 209 The value can be found on defined in urn:un:unecce:unefact:codelist:specification:5639:1988.

210 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription/@{any}
 211 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 212 to the RatingDescription element in the future. Unrecognized attributes MAY cause a fault or be
 213 silently ignore.

214 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingNumeric
 215 RatingNumeric element, Numeric value for the rating, is an optional element for Rating.

216 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingNumeric/@{any}
 217 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 218 to the RatingNumeric element in the future. Unrecognized attributes MAY cause a fault or be
 219 silently ignore.

220 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate
 221 RatingDate is the date when this Rating is obtained. It is an optional element for Rating.

222 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate/@Expired
 223 Expired is an optional attribute to indicate this Rating is expired or not. The value of this Expired
 224 attribute is set to true means this Rating has been expired as of the RatingDate.

225 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate/@{any}
 226 This is an extensibility mechanism to allow additional attributes, based on schemas,
 227 to be added to the RatingDate element in the future. Unrecognized attributes MAY
 228 cause a fault or be silently ignore.

229 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingReferenceUri
 230 RatingReferenceUri, Web page URL or other URI for this rating to reference to, is an optional
 231 element for the Rating element.

232 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingReferenceUri/@{any}
 233 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
 234 to the Rating element in the future. Unrecognized attributes MAY cause a fault or be silently
 235 ignore.

236 **Example**

237 The following example illustrates the use of List of Rating element. It describes a Rating element that is
 238 issued by Better Business Bureau:

239

```

240 (001) <?xml version="1.0" encoding="utf-8"?>
241 (002) <ListOfRating xmlns="..." ...>
242 (003)   <Rating Type="BBB">
243 (004)     <RatingIssuer>
  
```

```

244 (005) <IssuerName languageID="EN">Better Business Bureau, Inc.
245 </IssuerName>
246 (006) <IssuerUri>http://www.bbb.org/business-reviews/ratings/
247 </IssuerUri>
248 (007) </RatingIssuer>
249 (008) <RatingDescription languageID="EN">A+</RatingDescription>
250 (009) <RatingDate>2009-03-08</RatingDate>
251 (010)
252 <RatingReferenceUri>http://goldengate.bbb.org/WWWRoot/Report.aspx?site=99&
253 bbb=1116&firm=34825#bbbrating</RatingReferenceUri>
254 (011) </Rating>
255 (012) </ListOfRating>

```

256

257 The following example illustrates the use of List of Rating element. It describes a Rating element that is
258 issued by 51Honest.org in China:

259

```

260 (001) <?xml version="1.0" encoding="UTF-8"?>
261 (002) <BRating xmlns="..." ...>
262 (003) <ListOfRating>
263 (004) <Rating Type="51honest">
264 (005) <RatingIssuer>
265 (006) <IssuerName languageID="zh-CN">农博网</IssuerName>
266 (007) <IssuerUri >www.51honet.org</IssuerUri>
267 (008) </RatingIssuer>
268 (009) <RatingDescription languageID="zh-CN">信星计划</RatingDescription>
269 (010) <RatingNumeric>175</RatingNumeric>
270 (011) <RatingDate>2009-03-06</RatingDate>
271 (012) <RatingReferenceUri
272 >http://www.51honest.org/index.jsp?url=detail.credit%3faction=hywzMemberInfo%2
273 6credcode=300001000036803
274 (013) </RatingReferenceUri>
275 (014) </Rating>
276 (015) </ListOfRating>
277 (016) </BRating>

```

278

279 4 Rating Credentials

280 The Rating Credentials element for EERP-Rating, describes the credentials held by the service
281 provider with respect to a specific service.

282 Credentials may be issued with respect to a service provider and service by third-party organizations,
283 such as licenses, permissions, certifications, awards, associations, and affiliations.

284 Not like the Rating element inside the ListOfRating, each credential element in the Credentials element is
285 an independent, non-aggregated indicator for the rating measurement of the given business service.

286 There MAY be zero or one Credentials element present in the rating of service.

287 Syntax

```
288 <rt:Credentials xmlns:bqos="..." ...>  
289   <rt:Credential>rt:CredentialType  
290     <rt:CredentialIssuer ...>rt:IssuerType  
291       <rt:IssuerName languageID="..." >rt:IssuerNameType</rt:IssuerName> ?  
292       <rt:IssuerUri ...>rt:RatingUriType</rt:IssuerUri>  
293       ...  
294     </rt:CredentialIssuer>  
295     <rt:CredentialClass languageID="..." ...>  
296       rt:CredentialClassType</rt:CredentialClass> ?  
297     <rt:License languageID="..." ...>rt:LisenseType</rt:License> ?  
298     <rt:CredentialDate ...>rt:CredentialDateType  
299       <rt>DateIssued ...>rt>DateIssuedType</rt>DateIssued> ?  
300       <rt:ExpirationDate ...>rt:ExpirationDateType</rt:ExpirationDate> ?  
301     </rt:CredentialDate> ?  
302     <rt:CredentialReferenceUri ...>  
303       rt:RatingUriType</rt:CredentialReferenceUri> ?  
304     ...  
305   </rt:Credential> +  
306 </rt:Credentials>
```

307 The following describes the attributes and elements listed in the schema outlined above:

308 /rt:BRating/rt:Credentials

309 Credential aspect of the service which the service provider has, including certification, affiliations
310 and associations. It has a list of credential for Credentials.

311 /rt:BRating/rt:Credentials/rt:Credential

312 The Credential element is for each credential, certification, affiliation or association that the
313 service provider has for the service. This is a required element for the Credentials element.

314 /rt:BRating/rt:Credentials/rt:Credential/@Type

315 Type of the credential, an optional attribute in the Credential element, using enumeration type,
316 and the value SHOULD be one of the following:

317 Affiliation, Association, Award, Certification, License, Membership, Permission, Others

318 /rt:BRating/rt:Credentials/rt:Credential/@{any}

319 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
320 to the Credential element in the future. Unrecognized attributes MAY cause a fault or be silently
321 ignore.

322 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer

323 CredentialIssuer element is for issuing organization for this credential, such as the issuer of
324 certification, association, affiliation or Credential. For example, the Issuer can be AAA, BBB, or

325 State of California, etc. This element is a required element for Credential, which includes the
326 issuer name and the URI that represent this rating issuer organization.

327 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerName
328 IssuerName element, Issuer's name for the issuing organization for this rating or credential, is an
329 optional element for CredentialIssuer.

330 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerName/@languageID
331 Language ID is a required attribute in the IssuerName element, using xsd:language type. The
332 value can be those defined in urn:un:unece:uncefact:codelist:specification:5639:1988.

333 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerUri
334 It is the URI that represent the issuer organization. It is a required element for CredentialIssuer.

335 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerUri/@{any}
336 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
337 to the IssuerUri element in the future. Unrecognized attributes MAY cause a fault or be silently
338 ignore.

339 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/{any}
340 This is an extensibility mechanism to allow different (extensible) property or attribute
341 elements/parameters to be specified in the future. Unrecognized elements MAY cause a fault or
342 be silently ignore.

343 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialClass
344 CredentialClass element is the classification of the credential such as five-stars, or golden
345 member. It is an optional element for the Credential. It is an optional element for the Credential.

346 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialClass/@languageID
347 Language ID is a required attribute in the CredentialClass element, using xsd:language type. The
348 value can be those defined in urn:un:unece:uncefact:codelist:specification:5639:1988.

349 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialClass/@{any}
350 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
351 to the CredentialClass element in the future. Unrecognized attributes MAY cause a fault or be
352 silently ignore.

353 /rt:BRating/rt:Credentials/rt:Credential/rt:License
354 License element, the license number or membership number of the credential, is an optional
355 element for the Credential element.

356 /rt:BRating/rt:Credentials/rt:Credential/rt:License/@languageID
357 Language ID is a required attribute in the License element, using xsd:language type. The value
358 can be those defined in urn:un:unece:uncefact:codelist:specification:5639:1988.

359 /rt:BRating/rt:Credentials/rt:Credential/rt:License/@{any}
360 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
361 to the License element in the future. Unrecognized attributes MAY cause a fault or be silently
362 ignore.

363 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate
364 CredentialDate element is the date on this credential, including date when this credential, license
365 or certificate is issued and the expiration date for this license or membership. It is an optional
366 element for the Credential element.

367 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/@{any}
368 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
369 to the CredentialDate element in the future. Unrecognized attributes MAY cause a fault or be
370 silently ignore.

371 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:DateIssued
372 DateIssued element is the date when this credential, license or certificate is issued. It is an
373 optional element for the CredentialDate element.

374 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:DateIssued/@{any}
375 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
376 to the DateIssued element in the future. Unrecognized attributes MAY cause a fault or be silently
377 ignore.

378 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:ExpirationDate
379 ExpirationDate element, Expiration date for this license or membership, is an optional
380 element for the CredentialDate element.

381 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:ExpirationDate/@{any}
382 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
383 to the ExpirationDate element in the future. Unrecognized attributes MAY cause a fault or be
384 silently ignore.

385 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialReferenceUri
386 CredentialReferenceUri element, Web page URL or other URI for this credential reference, is an
387 optional element for Credential.

388 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialReferenceUri/@{any}
389 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
390 to the CredentialReferenceUri element in the future. Unrecognized attributes MAY cause a fault
391 or be silently ignore.

392 /rt:BRating/rt:Credentials/rt:Credential/{any}
393 This is an extensibility mechanism to allow different (extensible) property or attribute
394 elements/parameters to be specified in the future. Unrecognized elements MAY cause a fault or
395 be silently ignore.

396 Example

397 The following example illustrates the use of rating Credentials element. It describes the credential of
398 professional license issued by California Board For Professional Engineers And Land Surveyors:

```

399 (001) <?xml version="1.0" encoding="utf-8"?>
400 (002) <Credentials xmlns="..." ...>
401 (003)   <Credential Type="License">
402 (004)     <CredentialIssuer>
403 (005)       <IssuerName languageID="EN">California Board For Professional
404 Engineers And Land Surveyors </IssuerName>
405 (006)       <IssuerUri>http://www.pels.ca.gov/</IssuerUri>
406 (007)     </CredentialIssuer>
407 (008)     <CredentialClass languageID="EN">CIVIL ENGINEER</CredentialClass>
408 (009)     <License languageID="EN">42456</License>
409 (010)     <CredentialDate>
410 (011)       <ExpirationDate>2010-03-31</ExpirationDate>
411 (012)     </CredentialDate>
412 (013)   </Credential>
413 (014)   <CredentialReferenceUri>http://www2.dca.ca.gov/pls/wllpub/WLLQRYNA$LCEV2.Query
414 View?P_LICENSE_NUMBER=42456&P_LTE_ID=741</CredentialReferenceUri>
415 (015) </Credentials>

```

417 The following example illustrates the use of rating Credentials element. It describes the credential of
418 member of ASCE:

```

419 (001) <?xml version="1.0" encoding="utf-8"?>
420 (002) <Credentials xmlns="..." ...>
421 (003)   <Credential Type="Membership">

```

```

422      (004)      <CredentialIssuer>
423      (005)          <IssuerName languageID="EN">American Society of Civil Engineers
424      </IssuerName>
425      (006)          <IssuerUri>http://www.asce.org/</IssuerUri>
426      (007)      </CredentialIssuer>
427      (008)      <CredentialClass languageID="EN">Member</CredentialClass>
428      (009)      <CredentialDate>
429      (010)          <DateIssued>1987-08-13</DateIssued>
430      (011)          <ExpirationDate>2010-12-31</ExpirationDate>
431      (012)      </CredentialDate>
432      (013)      </Credential>
433      (014) </Credentials>

```

434 The following example illustrates the use of rating Credentials element. It describes the credential of
435 Association type issued by Better Business Bureau, Inc.:

```

436      (001) <?xml version="1.0" encoding="utf-8"?>
437      (002) <Credentials xmlns="..." ...>
438      (003)      <Credential Type="Association">
439      (004)          <CredentialIssuer>
440      (005)              <IssuerName languageID="EN">Better Business Bureau, Inc.
441      </IssuerName>
442      (006)              <IssuerUri>http://goldengate.bbb.org/</IssuerUri>
443      (007)          </CredentialIssuer>
444      (008)          <CredentialClass languageID="EN">3</CredentialClass>
445      (009)          <CredentialReferenceUri>http://www.res99.com/hotel/10021453-
446      102008020.html?ses=1e65c27bad81e82b07a39070fed04d87</CredentialReferenceUri>
447      (010)      </Credential>
448      (011) </Credentials>

```

449

5 Rating Examples

450

5.1 Service Rating with an Engineering Service

451

The following example illustrates a Business Rating result of a civil engineering service. The service provider has the following rating and credentials for a service:

452

453

1. The service is classified as A+ by BBB (Better Business Bureau, Inc.), as of May 8th, 2009.

454

455

2. The service provider holds a civil engineer's professional license as one of credentials, which is issued by California Board for Professional Engineers and Land Surveyors. This license expiration date is December 31st, 2010.

456

457

458

3. In additional, the service provider is a member of ASCE (American Society of Civil Engineers since August 13th, 1987. This membership expiration date is December 31st, 2010.

459

460

461

The following example illustrates the whole Rating document for above ratings:

462

```
(01) <?xml version="1.0" encoding="UTF-8"?>
(02) <BRating xmlns="..." ... >
(03)   <ListOfRating>
(04)     <Rating Type="BBB">
(05)       <RatingIssuer>
(06)         <IssuerName languageID="EN">Better Business Bureau, Inc.
(07)       </IssuerName>
(08)       <IssuerUri>http://www.bbb.org/business-reviews/ratings/
(09)     </IssuerUri>
(10)     </RatingIssuer>
(11)     <RatingDescription languageID="EN">A+</RatingDescription>
(12)     <RatingDate>2009-05-08</RatingDate>
(13)     <RatingReferenceUri>
(14)       http://goldengate.bbb.org/WWWRoot/Report.aspx?site=99&bbb=1116&firm=34825#bbbrating</RatingReferenceUri>
(15)     </Rating>
(16)   </ListOfRating>
(17)   <Credentials>
(18)     <Credential Type="License">
(19)       <CredentialIssuer>
(20)         <IssuerName languageID="EN">
(21)           California Board For Professional Engineers And Land Surveyors
(22)         </IssuerName>
(23)         <IssuerUri>http://www.pels.ca.gov/</IssuerUri>
(24)       </CredentialIssuer>
(25)       <CredentialClass languageID="EN">CIVIL ENGINEER</CredentialClass>
(26)       <License languageID="EN">42456</License>
(27)       <CredentialDate>
(28)         <ExpirationDate>2010-12-31</ExpirationDate>
(29)       </CredentialDate>
(30)       <CredentialReferenceUri>
(31)         http://www2.dca.ca.gov/pls/wllpub/WLLQRYNA$LCEV2.QueryView?P_LICENSE_NUM
(32)         BER=42456&P_LTE_ID=741</CredentialReferenceUri>
(33)       </Credential>
(34)     <Credential Type="Membership">
(35)       <CredentialIssuer>
(36)         <IssuerName languageID="EN">
(37)           American Society of Civil Engineers</IssuerName>
(38)         <IssuerUri>http://www.asce.org/</IssuerUri>
(39)       </CredentialIssuer>
(40)       <CredentialClass languageID="EN">Member</CredentialClass>
```

501

```

503      (38)      <CredentialDate>
504      (39)      <DateIssued>1987-08-13</DateIssued>
505      (40)      <ExpirationDate>2010-12-31</ExpirationDate>
506      (41)      </CredentialDate>
507      (42)      </Credential>
508      (43)      </Credentials>
509      (44) </BRating>

```

510 5.2 Service Rating for Gas-Meters Product

511 This Rating example illustrates the ratings and credentials for gas-meters produced by a fictitious
512 Hangzhou Innover Technology Co. Ltd.

513 The Rating message has the following contents:

- 514 1) Credit rating on this provider is 980.1, rated by 51Honest.org (<http://www.51Honest.org>), a third-party
515 organization in China
- 516 2) License on gas-meter production is issued in December, 1997, by a department in government that is
517 Zhejiang Bureau of Quality and Technical Supervision in the China (<http://www.zjbts.gov.cn/>).
- 518 3) Certificate on gas-meter product is certificated as the first Dual-Explosion-Proof Certificate in
519 November 1997, Certificate is issued by a third-party organization, National Supervision and
520 Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI) in Shanghai, China
521 (<http://www.sipai.com/sitiias/nepsi.asp>)

```

522 (01) <?xml version="1.0" encoding="UTF-8"?>
523 (02) <BRating xmlns="...">
524 (03)   <ListOfRating>
525 (04)     <Rating Type="Credit">
526 (05)       <RatingIssuer>
527 (06)         <IssuerName languageID="zh-CN">信星计划 51Honest.org</IssuerName>
528 (07)         <IssuerUri>http://www.51Honest.org</IssuerUri>
529 (08)       </RatingIssuer>
530 (09)       <RatingNumeric>980.1</RatingNumeric>
531 (10)       <RatingDate>2009-04-31</RatingDate>
532 (11)       <RatingReferenceUri/>
533 (12)     </Rating>
534 (13)   </ListOfRating>
535 (14)   <Credentials>
536 (15)     <Credential Type="License">
537 (16)       <CredentialIssuer>
538 (17)         <IssuerName languageID="zh-CN">浙江省质量技术监督局</IssuerName>
539 (18)         <IssuerUri>http://www.zjbts.gov.cn/</IssuerUri>
540 (19)       </CredentialIssuer>
541 (20)       <CredentialClass languageID="zh-CN">中华人民共和国计量器具生产制造许可证
542 </CredentialClass>
543 (21)       <License languageID="en-us">ZJJHJDJ-JL1997120001</License>
544 (22)       <CredentialDate>
545 (23)         <DateIssued>1997-12-01</DateIssued>
546 (24)       </CredentialDate>
547 (25)     </Credential>
548 (26)     <Credential Type="Certification">
549 (27)       <CredentialIssuer>
550 (28)         <IssuerName languageID="en">National Supervision and Inspection
551 Center for Explosion Protection and Safety of Instrumentation in
552 Shanghai</IssuerName>
553 (29)         <IssuerUri>http://www.sipai.com/sitiias/nepsi.asp</IssuerUri>
554 (30)       </CredentialIssuer>
555 (31)       <CredentialClass languageID="en">The first Dual-Explosion-Proof
556 Certificate</CredentialClass>
557 (32)       <License languageID="en-us">NEPSI-FB1997110001</License>
558 (33)       <CredentialDate>
559 (34)         <DateIssued>1997-11-01</DateIssued>
560 (35)     </CredentialDate>

```

```
561 (36) </Credential>  
562 (37) </Credentials>  
563 (38) </BRating>
```

564

6 Conformance

565 An implementation conforms to this specification if it satisfies all of the MUST or REQUIRED level
566 requirements defined within this specification. A SOAP Node MUST NOT use the XML namespace
567 identifier for this specification (listed in Section 1.1) within SOAP Envelopes unless it is compliant with this
568 specification.

569 This specification references a number of other specifications (listed in Section 1.4.2). In order to comply
570 with this specification, an implementation MUST implement the portions of referenced specifications
571 necessary to comply with the required provisions of this specification. Additionally, the implementation of
572 the portions of the referenced specifications that are specifically cited in this specification MUST comply
573 with the rules for those portions as established in the referenced specification.

574 Normative text within this specification takes precedence over normative outlines (as described in section
575 1.4.1), which in turn take precedence over the XML Schema [XML Schema Part 1, Part 2] and WSDL
576 [WSDL 1.1] descriptions. That is, the normative text in this specification further constrains the schemas
577 and/or WSDL that are part of this specification; and this specification contains further constraints on the
578 elements defined in referenced schemas.

579 The minimum set of information exchange for Business Rating that would allow conforming applications
580 to exchange information and satisfy the conformance should have either
581 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerUri element or
582 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerUri element, like this:

```
583 (001) <?xml version="1.0" encoding="utf-8"?>  
584 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">  
585 (003) <ListOfRating>  
586 (004) <Rating>  
587 (005) <RatingIssuer>  
588 (006) <IssuerUri>http://www.sample-rating-issuer.org</IssuerUri>  
589 (007) </RatingIssuer>  
590 (008) . . .  
591 (009) </Rating>  
592 (010) </ListOfRating>  
593 (011) </BRating>
```

594 Or like this:

```
595 (001) <?xml version="1.0" encoding="utf-8"?>  
596 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">  
597 (003) <Credentials>  
598 (004) <Credential>  
599 (005) <CredentialIssuer>  
600 (006) <IssuerUri>http://www.sample-cred-issuer.com</IssuerUri>  
601 (007) </CredentialIssuer>  
602 (008) . . .  
603 (009) </Credential>  
604 (010) </Credentials>  
605 (011) </BRating>
```

606 This specification defines a number of extensions; compliant services are NOT REQUIRED to implement
607 those extensions defined in this specification. However, if a service implements an aspect of the
608 specification, it MUST comply with the requirements specified (e.g. related "MUST" statements). If an
609 implementation silently ignore unrecognized attributes where any attribute is allowed, or silently ignore

610 unrecognized elements where any element is allowed, should be considered as interoperable
611 implementation.

612 **A. Acknowledgements**

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615 **Participants:**

616		
617	Rex Brooks	Individual
618	Szu Chang	Changfeng Open Standards Platform Software Alliance
619	William Cox	Individual
620	Andy Lee	Changfeng Open Standards Platform Software Alliance
621	Carl Mattocks	Individual
622	James Zhili Zhang	TIBCO Software Inc.
623	Hong Zhou	Changfeng Open Standards Platform Software Alliance

B. XML Schema for Business Rating

```

625 <?xml version="1.0" encoding="UTF-8"?>
626 <!--
627     Document Type:      EERP-Rating CD03
628     Create On:         01/06/2010
629 -->
630
631 <!-- ===== xsd:schema Element With Namespaces Declarations ===== -->
632 <!-- ===== Copyright Notice ===== -->
633 <!--
634     OASIS takes no position regarding the validity or scope of any
635     intellectual property or other rights that might be claimed to pertain
636     to the implementation or use of the technology described in this
637     document or the extent to which any license under such rights
638     might or might not be available; neither does it represent that it has
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640     procedures with respect to rights in OASIS specifications can be
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643     available, or the result of an attempt made to obtain a general
644     license or permission for the use of such proprietary rights by
645     implementors or users of this specification, can be obtained from
646     the OASIS Executive Director.
647
648     OASIS invites any interested party to bring to its attention any
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673     This document and the information contained herein is provided on
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676     WARRANTY THAT THE USE OF THE INFORMATION HEREIN
677     WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED
678     WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A
679     PARTICULAR PURPOSE.
680 -->
681 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://docs.oasis-
682 open.org/ns/soa-eerp/rt/200903" xmlns:eerp="http://docs.oasis-open.org/ns/soa-eerp/rt/200903"
683 xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
684 xmlns:udt="urn:un:unece:unefact:data:specification:UnqualifiedDataTypesSchemaModule:2"
685 xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:rt="http://docs.oasis-open.org/ns/soa-
686 eerp/rt/200903" targetNamespace="http://docs.oasis-open.org/ns/soa-eerp/rt/200903"
687 elementFormDefault="qualified" attributeFormDefault="unqualified" version="1.0">
688     <!-- ===== Imports ===== -->
689     <xsd:import namespace="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
690 schemaLocation="http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-
691 2.0.xsd"/>

```

```

692     <xsd:import
693 namespace="urn:un:unece:uncefact:data:specification:UnqualifiedDataTypesSchemaModule:2"
694 schemaLocation="http://docs.oasis-open.org/ubl/os-UBL-
695 2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd"/>
696     <!-- ===== Root Element ===== -->
697     <xsd:element name="BRating" type="BRatingType">
698       <xsd:annotation>
699         <xsd:documentation>The BRating is the root element of Business Rating for EERP which is for
700 business reliability and reputation of the service and its services provider. It has both
701 ListOfRating and Credentials elements which are indicators to represent for business reliability
702 and reputation of the service and its services provider. </xsd:documentation>
703       </xsd:annotation>
704     </xsd:element>
705     <!-- ===== Element Declarations ===== -->
706     <xsd:element name="Credential" type="CredentialType">
707       <xsd:annotation>
708         <xsd:documentation>The Credential element is for each credential, certification,
709 affiliation or association that the service provider has for the service. </xsd:documentation>
710       </xsd:annotation>
711     </xsd:element>
712     <xsd:element name="CredentialClass" type="CredentialClassType">
713       <xsd:annotation>
714         <xsd:documentation>CredentialClass element is the classification of the credential such as
715 five-stars, or golden member. </xsd:documentation>
716       </xsd:annotation>
717     </xsd:element>
718     <xsd:element name="CredentialDate" type="CredentialDateType">
719       <xsd:annotation>
720         <xsd:documentation>CredentialDate element is the date on this credential, including date
721 when this credential, license or certificate is issued and the expiration date for this license
722 or membership. </xsd:documentation>
723       </xsd:annotation>
724     </xsd:element>
725     <xsd:element name="CredentialIssuer" type="IssuerType">
726       <xsd:annotation>
727         <xsd:documentation>Name of affiliations or associations</xsd:documentation>
728       </xsd:annotation>
729     </xsd:element>
730     <xsd:element name="Credentials" type="CredentialsType">
731       <xsd:annotation>
732         <xsd:documentation>The Rating Credentials element for EERP-Rating, describes the
733 credentials held by the service provider with respect to a specific service.
734 Credentials may be issued with respect to a service provider and service by third-party
735 organizations, such as licenses, permissions, certifications, awards, associations, and
736 affiliations.
737     </xsd:documentation>
738     </xsd:annotation>
739   </xsd:element>
740   <xsd:element name="DateIssued" type="DateIssuedType">
741     <xsd:annotation>
742       <xsd:documentation>The date when this credential, license or certificate was
743 issued</xsd:documentation>
744     </xsd:annotation>
745   </xsd:element>
746   <xsd:element name="ExpirationDate" type="ExpirationDateType">
747     <xsd:annotation>
748       <xsd:documentation>Expiration date for this license or membership</xsd:documentation>
749     </xsd:annotation>
750   </xsd:element>
751   <xsd:element name="IssuerName" type="IssuerNameType">
752     <xsd:annotation>
753       <xsd:documentation>Name for the issuing organization for the rating or
754 credential</xsd:documentation>
755     </xsd:annotation>
756   </xsd:element>
757   <xsd:element name="IssuerUri" type="RatingUriType">
758     <xsd:annotation>
759       <xsd:documentation>the URI that represent the issuer organization. </xsd:documentation>
760     </xsd:annotation>
761   </xsd:element>
762   <xsd:element name="License" type="LicenseType">
763     <xsd:annotation>
764       <xsd:documentation>License number </xsd:documentation>

```

```

765     </xsd:annotation>
766 </xsd:element>
767 <xsd:element name="ListOfRating" type="ListOfRatingType">
768   <xsd:annotation>
769     <xsd:documentation>The ListOfRating element contains the list of Rating issued by a third
770 party rating organization. Each Rating element in the ListOfRating has one of the two elements to
771 represent the rating measurement of the given business service: 1) - an aggregated number, in
772 RatingNumeric element. 2) - an aggregated classification description, in RatingDescription
773 element </xsd:documentation>
774   </xsd:annotation>
775 </xsd:element>
776 <xsd:element name="Rating" type="RatingType">
777   <xsd:annotation>
778     <xsd:documentation>The Rating element represents a rating measurement of the given business
779 service. The rating measurement is issued by a third party rating organization.
780 </xsd:documentation>
781   </xsd:annotation>
782 </xsd:element>
783 <xsd:element name="RatingDescription" type="RatingDescriptionType">
784   <xsd:annotation>
785     <xsd:documentation>Rating description for the rating where the rating can be represented in
786 String format, such as Good, Fair, Average, etc.</xsd:documentation>
787   </xsd:annotation>
788 </xsd:element>
789 <xsd:element name="RatingDate" type="RatingDateType">
790   <xsd:annotation>
791     <xsd:documentation>Date when this Rating is obtained</xsd:documentation>
792   </xsd:annotation>
793 </xsd:element>
794 <xsd:element name="RatingIssuer" type="IssuerType">
795   <xsd:annotation>
796     <xsd:documentation>Issuing organization for this quality/rating, including the issuer name
797 and the URI that represent this rating issuer organization </xsd:documentation>
798   </xsd:annotation>
799 </xsd:element>
800 <xsd:element name="RatingNumeric" type="RatingNumericType">
801   <xsd:annotation>
802     <xsd:documentation>Rating numeric number</xsd:documentation>
803   </xsd:annotation>
804 </xsd:element>
805 <xsd:element name="RatingReferenceUri" type="RatingUriType">
806   <xsd:annotation>
807     <xsd:documentation>Web page URL or other URI for this rating to reference
808 to.</xsd:documentation>
809   </xsd:annotation>
810 </xsd:element>
811 <!-- Extension -->
812 <xsd:element name="Extension">
813   <xsd:complexType mixed="true">
814     <xsd:choice minOccurs="0" maxOccurs="unbounded">
815       <xsd:any processContents="skip" minOccurs="0" maxOccurs="unbounded"/>
816     </xsd:choice>
817     <xsd:attribute name="optional" type="xsd:boolean" use="optional" default="true"/>
818   </xsd:complexType>
819 </xsd:element>
820 <!-- ===== Type Definitions ===== -->
821 <xsd:complexType name="CredentialClassType">
822   <xsd:annotation>
823     <xsd:documentation>Complex type for membership classification </xsd:documentation>
824   </xsd:annotation>
825   <xsd:simpleContent>
826     <xsd:extension base="cbc:NameType">
827       <xsd:anyAttribute namespace="##any" processContents="lax"/>
828     </xsd:extension>
829   </xsd:simpleContent>
830 </xsd:complexType>
831 <xsd:complexType name="CredentialDateType">
832   <xsd:annotation>
833     <xsd:documentation>Complex type for the date on this credential </xsd:documentation>
834   </xsd:annotation>
835   <xsd:sequence>
836     <xsd:element ref="DateIssued" minOccurs="0">
837       <xsd:annotation>

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838         <xsd:documentation>The date wen this credential, license or certificate is
839 issued</xsd:documentation>
840     </xsd:annotation>
841 </xsd:element>
842     <xsd:element ref="ExpirationDate" minOccurs="0">
843     <xsd:annotation>
844         <xsd:documentation>Expiration date for this Rating, license or
845 membership</xsd:documentation>
846     </xsd:annotation>
847 </xsd:element>
848 </xsd:sequence>
849     <xsd:anyAttribute namespace="##any" processContents="lax"/>
850 </xsd:complexType>
851 <xsd:complexType name="CredentialsType">
852     <xsd:annotation>
853         <xsd:documentation>Complex type for Credentials and association</xsd:documentation>
854     </xsd:annotation>
855     <xsd:sequence>
856         <xsd:element ref="Credential" maxOccurs="unbounded">
857         <xsd:annotation>
858             <xsd:documentation>The Credential element is for each credential, certification,
859 affiliation or association that the service provider has for the service. This is a required
860 element for the Credentials element. </xsd:documentation>
861         </xsd:annotation>
862     </xsd:element>
863 </xsd:sequence>
864     <xsd:anyAttribute namespace="##any" processContents="lax"/>
865 </xsd:complexType>
866 <xsd:complexType name="CredentialType">
867     <xsd:annotation>
868         <xsd:documentation>Complex type for one credential or association</xsd:documentation>
869     </xsd:annotation>
870     <xsd:sequence>
871         <xsd:element ref="CredentialIssuer">
872         <xsd:annotation>
873             <xsd:documentation>Issuing organization for this credential, such as the name of
874 certification, association, affiliation or credential, such as AAA, BBB, or State of California,
875 including the issuer name and the URI that represent this rating issuer organization.
876 </xsd:documentation>
877         </xsd:annotation>
878     </xsd:element>
879     <xsd:element ref="CredentialClass" minOccurs="0">
880     <xsd:annotation>
881         <xsd:documentation>CredentialClass element is the classification of the credential such
882 as five-stars, or golden member. It is an optional element for the
883 Credential.</xsd:documentation>
884     </xsd:annotation>
885 </xsd:element>
886     <xsd:element ref="License" minOccurs="0">
887     <xsd:annotation>
888         <xsd:documentation>License element, the license number or membership number of the
889 credential, is an optional element for the Credential element.</xsd:documentation>
890     </xsd:annotation>
891 </xsd:element>
892     <xsd:element ref="CredentialDate" minOccurs="0"/>
893     <xsd:element name="CredentialReferenceUri" type="RatingUriType" minOccurs="0">
894     <xsd:annotation>
895         <xsd:documentation>CredentialReferenceUri element, Web page URL or other URI for this
896 credential reference, is an optional element for Credential. </xsd:documentation>
897     </xsd:annotation>
898 </xsd:element>
899     <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
900 </xsd:sequence>
901     <xsd:attribute name="Type" type="CrendtialTypeEnum" use="optional"/>
902     <xsd:anyAttribute namespace="##any" processContents="lax"/>
903 </xsd:complexType>
904 <xsd:complexType name="DateIssuedType">
905     <xsd:annotation>
906         <xsd:documentation>Complex type of the date when this certificate or license is
907 issued</xsd:documentation>
908     </xsd:annotation>
909     <xsd:simpleContent>
910         <xsd:extension base="cbc:StartDateType">

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911         <xsd:anyAttribute namespace="##any" processContents="lax"/>
912     </xsd:extension>
913 </xsd:simpleContent>
914 </xsd:complexType>
915 <xsd:complexType name="BRatingType">
916     <xsd:annotation>
917         <xsd:documentation>Complex type for the EERP-Rating</xsd:documentation>
918     </xsd:annotation>
919     <xsd:sequence>
920         <xsd:element ref="ListOfRating" minOccurs="0">
921             <xsd:annotation>
922                 <xsd:documentation>ListOfRating element is for the rating aspect of service which is
923 provided by third party and measured in terms of rates for the service. Each Rating element in
924 the ListOfRating element is issued by a rating organization that has either an aggregated numeric
925 number or an aggregated classification description to represent the rating measurement of the
926 given business service.</xsd:documentation>
927             </xsd:annotation>
928         </xsd:element>
929         <xsd:element ref="Credentials" minOccurs="0">
930             <xsd:annotation>
931                 <xsd:documentation>Credentials element is for the rating aspect of service which is
932 measured in terms of credentials for the service that the service provider owns or holds.
933 Credentials are issued by organizations for the service, such as licenses, permissions,
934 certifications, associations, affiliations, etc. Each credential element in the Credentials
935 element is a non-aggregated indicator for the rating measurement of the given business service,
936 and it does not provide an aggregated value for the measurement.</xsd:documentation>
937             </xsd:annotation>
938         </xsd:element>
939         <xsd:element ref="Extension" minOccurs="0" maxOccurs="unbounded"/>
940     </xsd:sequence>
941     <xsd:anyAttribute namespace="##any" processContents="lax"/>
942 </xsd:complexType>
943 <xsd:complexType name="ExpirationDateType">
944     <xsd:annotation>
945         <xsd:documentation>Complex type of expiration date</xsd:documentation>
946     </xsd:annotation>
947     <xsd:simpleContent>
948         <xsd:extension base="cbc:ExpiryDateType">
949             <xsd:anyAttribute namespace="##any" processContents="lax"/>
950         </xsd:extension>
951     </xsd:simpleContent>
952 </xsd:complexType>
953 <xsd:complexType name="IssuerNameType">
954     <xsd:annotation>
955         <xsd:documentation>Complex type for the Rating issuer name</xsd:documentation>
956     </xsd:annotation>
957     <xsd:simpleContent>
958         <xsd:extension base="cbc:NameType"/>
959     </xsd:simpleContent>
960 </xsd:complexType>
961 <xsd:complexType name="IssuerType">
962     <xsd:annotation>
963         <xsd:documentation>Complex type for issuing organization, including the issuer name and the
964 URI that represent this rating issuer organization. </xsd:documentation>
965     </xsd:annotation>
966     <xsd:sequence>
967         <xsd:element ref="IssuerName" minOccurs="0">
968             <xsd:annotation>
969                 <xsd:documentation>Name for the issuing organization for this rating or
970 credential</xsd:documentation>
971             </xsd:annotation>
972         </xsd:element>
973         <xsd:element ref="IssuerUri">
974             <xsd:annotation>
975                 <xsd:documentation>The URI that represent the issuer organization. </xsd:documentation>
976             </xsd:annotation>
977         </xsd:element>
978         <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
979     </xsd:sequence>
980     <xsd:anyAttribute namespace="##any" processContents="lax"/>
981 </xsd:complexType>
982 <xsd:complexType name="LicenseType">
983     <xsd:annotation>

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984         <xsd:documentation>Complex type for the license number or membership
985 number</xsd:documentation>
986     </xsd:annotation>
987     <xsd:simpleContent>
988         <xsd:extension base="cbc:NameType">
989             <xsd:anyAttribute namespace="##any" processContents="lax"/>
990         </xsd:extension>
991     </xsd:simpleContent>
992 </xsd:complexType>
993 <xsd:complexType name="ListOfRatingType">
994     <xsd:annotation>
995         <xsd:documentation>Complex type for ListOfRating </xsd:documentation>
996     </xsd:annotation>
997     <xsd:sequence>
998         <xsd:element ref="Rating" maxOccurs="unbounded">
999             <xsd:annotation>
1000                 <xsd:documentation>The Rating element represents a rating measurement of the given
1001 business service. The rating measurement is issued by a third party rating organization.
1002 </xsd:documentation>
1003             </xsd:annotation>
1004         </xsd:element>
1005     </xsd:sequence>
1006     <xsd:anyAttribute namespace="##any" processContents="lax"/>
1007 </xsd:complexType>
1008 <xsd:complexType name="RatingDescriptionType">
1009     <xsd:annotation>
1010         <xsd:documentation>Complex type for the description of the Rating</xsd:documentation>
1011     </xsd:annotation>
1012     <xsd:simpleContent>
1013         <xsd:extension base="cbc:NameType">
1014             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1015         </xsd:extension>
1016     </xsd:simpleContent>
1017 </xsd:complexType>
1018 <xsd:complexType name="RatingDateType">
1019     <xsd:annotation>
1020         <xsd:documentation>Complex type of the date when this Rating is
1021 obtained</xsd:documentation>
1022     </xsd:annotation>
1023     <xsd:simpleContent>
1024         <xsd:extension base="cbc:ExpiryDateType">
1025             <xsd:attribute name="Expired" type="xsd:boolean" use="optional" default="false"/>
1026             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1027         </xsd:extension>
1028     </xsd:simpleContent>
1029 </xsd:complexType>
1030 <xsd:complexType name="RatingNumericType">
1031     <xsd:annotation>
1032         <xsd:documentation>Complex type of Rating's value number</xsd:documentation>
1033     </xsd:annotation>
1034     <xsd:simpleContent>
1035         <xsd:extension base="udt:NumericType">
1036             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1037         </xsd:extension>
1038     </xsd:simpleContent>
1039 </xsd:complexType>
1040 <xsd:complexType name="RatingType">
1041     <xsd:annotation>
1042         <xsd:documentation>Complex type for Rating for EERP Rating</xsd:documentation>
1043     </xsd:annotation>
1044     <xsd:sequence>
1045         <xsd:element ref="RatingIssuer">
1046             <xsd:annotation>
1047                 <xsd:documentation>Issuing organization for this rating, including the issuer name and
1048 the URI that represent this rating issuer organization. </xsd:documentation>
1049             </xsd:annotation>
1050         </xsd:element>
1051         <xsd:element ref="RatingDescription" minOccurs="0">
1052             <xsd:annotation>
1053                 <xsd:documentation>Rating description for the rating where the rating can be represented
1054 in String format, such as Good, Fair, Average, etc. It is an optional element for
1055 Rating.</xsd:documentation>
1056             </xsd:annotation>

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1057     </xsd:element>
1058     <xsd:element ref="RatingNumeric" minOccurs="0">
1059       <xsd:annotation>
1060         <xsd:documentation>RatingNumeric element, Numeric value for the rating, is an optional
1061 element for Rating.</xsd:documentation>
1062       </xsd:annotation>
1063     </xsd:element>
1064     <xsd:element ref="RatingDate" minOccurs="0">
1065       <xsd:annotation>
1066         <xsd:documentation>Date when this Rating is obtained. It is an optional element for
1067 Rating.</xsd:documentation>
1068       </xsd:annotation>
1069     </xsd:element>
1070     <xsd:element ref="RatingReferenceUri" minOccurs="0">
1071       <xsd:annotation>
1072         <xsd:documentation>RatingReferenceUri, Web page URL or other URI for this rating to
1073 reference to, is an optional element for the Rating element.</xsd:documentation>
1074       </xsd:annotation>
1075     </xsd:element>
1076     <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
1077   </xsd:sequence>
1078   <xsd:attribute name="Type" type="xs:anySimpleType" use="optional"/>
1079   <xsd:anyAttribute namespace="##any" processContents="lax"/>
1080 </xsd:complexType>
1081 <xsd:complexType name="RatingUriType">
1082   <xsd:annotation>
1083     <xsd:documentation>Complex type for the rating reference URI or Web page
1084 URL</xsd:documentation>
1085   </xsd:annotation>
1086   <xsd:simpleContent>
1087     <xsd:extension base="xsd:anyURI">
1088       <xsd:anyAttribute namespace="##any" processContents="lax"/>
1089     </xsd:extension>
1090   </xsd:simpleContent>
1091 </xsd:complexType>
1092 <xsd:simpleType name="CrendtialTypeEnum">
1093   <xsd:annotation>
1094     <xsd:documentation>Crendtial Type enumeration</xsd:documentation>
1095   </xsd:annotation>
1096   <xsd:restriction base="xsd:string">
1097     <xsd:enumeration value="Affiliation"/>
1098     <xsd:enumeration value="Association"/>
1099     <xsd:enumeration value="Award"/>
1100     <xsd:enumeration value="Certification"/>
1101     <xsd:enumeration value="License"/>
1102     <xsd:enumeration value="Membership"/>
1103     <xsd:enumeration value="Permission"/>
1104     <xsd:enumeration value="Others"/>
1105   </xsd:restriction>
1106 </xsd:simpleType>
1107 </xsd:schema>

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1108 **C. Non-Normative Text**

1109 None

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D. Revision History

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Revision	Date	Editor	Changes Made
0.9	03/17/2009	Szu Chang	Initial draft
WD01	04/23/2009	Szu Chang	Renamed draft 0.9 to working draft 01 (WD01)
WD02	05/09/2009	Szu Chang	Fixed Issue #I007, I008 and I009, and get ready for Committee Draft CD01
WD03	05/17/2009	Szu Chang	Added conformance section
WD04	06/08/2009	Szu Chang	Fixed Issue #I018
WD05	06/12/2009	Szu Chang	Fixed Issue #I018 that changed BusinessRating to BRating
WD06	06/24/2009	Szu Chang	Fixed Issue #I027, I030, I034, I037, I040, I046, and I057.
WD07	07/03/2009	Szu Chang	Fixed Issue #I027, I034, I050, and I054.
CD02	07/11/2009	Szu Chang	Changed WD07 to CD02 after approved by TC
CD03	01/06/2010	Szu Chang	Changed NS and fixed URIs from CD02 to CD03

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