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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 Business Rating (bRating) and SOA-EERP Business Service Level Agreement (bSLA) which need to be understood in combination.

Declared XML Namespace(s):

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

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

44
45 **Status:**
46 This document was last revised or approved by the SOA-EERP TC on the above date. The level
47 of approval is also listed above. Check the “Latest Version” or “Latest Approved Version” location
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49 Technical Committee members should send comments on this specification to the Technical
50 Committee’s email list. Others should send comments to the Technical Committee by using the
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52 [open.org/committees/soa-eerp/](http://www.oasis-open.org/committees/soa-eerp/).

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56 [open.org/committees/soa-eerp/ipr.php](http://www.oasis-open.org/committees/soa-eerp/ipr.php)).

57 The non-normative errata page for this specification is located at [http://www.oasis-](http://www.oasis-open.org/committees/soa-eerp/)
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1 Introduction

126

127 This document is the specification for Business Rating (**bRating**) for End-to-End Resource Planning
128 (EERP), an XML vocabulary for information exchange on business ~~credibility~~**credibility**, reliability and
129 reputation of the service providers.

130 According to OASIS Reference Model for Service Oriented Architecture [SOA-RM], the Service Oriented
131 Architecture (SOA) is a paradigm for organizing and utilizing distributed capabilities that may be under the
132 control of different ownership domains. The service within SOA is a mechanism to enable access to one
133 or more capabilities, where the access is provided using a prescribed interface and is exercised
134 consistent with constraints and policies as specified by the service description. This specification further
135 defines the bRating for the services within the EERP technology. The applications of this specification
136 are any kind of business services, and they are not limited to only Web Services.

137 EERP applies the well-known technique for service discovery, ~~composition, simulation,~~ and optimization
138 ~~techniques~~ in a novel way to improve business results. It models the business process and the range of
139 potential services, and then guideguides the selection and deployment of services based on the end-to-
140 end business value.

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

1.1 Terminology

145

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

1.1.1 Notational Conventions

149

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

- 151 • The syntax appears as an XML instance, but values in italics indicate data types instead of literal
152 values.
- 153 • Characters are appended to elements and attributes to indicate cardinality:
 - 154 ○ "?" (0 or 1)
 - 155 ○ "*" (0 or more)
 - 156 ○ "+" (1 or more)
- 157 • The character "|" is used to indicate a choice between alternatives.
- 158 • The characters "(" and ")" are used to indicate that contained items are to be treated as a group
159 with respect to cardinality or choice.
- 160 • The characters "[" and "]" are used to call out references and property names.
- 161 • Ellipses (i.e., "...") indicate points of extensibility. Additional children and/or attributes MAY be
162 added at the indicated extension points but MUST NOT contradict the semantics of the parent
163 and/or owner, respectively. By default, if a receiver does not recognize an extension, the receiver
164 SHOULD ignore the extension; exceptions to this processing rule, if any, are clearly indicated
165 below.
- 166 • XML namespace prefixes (see Table 1) are used to indicate the namespace of the element being
167 defined.

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

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

176 Extensibility points in the exemplar may not be described in the corresponding text.
 177

178 1.2 Normative References

179 **[RFC2119]** S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*,
 180 <http://www.ietf.org/rfc/rfc2119.txt>~~http://www.ietf.org/rfc/rfc2119.txt~~, IETF RFC
 181 2119, March 1997.

182 ~~<http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>~~
 183 ~~<http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>~~

184 **[SOAP]** W3C Note, "SOAP: Simple Object Access Protocol 1.1", 08 May 2000.
 185 ~~<http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>~~
 186 ~~<http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>~~

187 **[SOAP12]** W3C Recommendation, "SOAP 1.2 Part 1: Messaging Framework", 24 June
 188 2003.
 189 ~~<http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>~~
 190 ~~<http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>~~

191 **[URI]** T. Berners-Lee, R. Fielding, L. Masinter, "Uniform Resource Identifiers (URI):
 192 Generic Syntax", RFC 3986, MIT/LCS, Day Software, Adobe Systems, January
 193 2005.
 194 ~~<http://www.ietf.org/rfc/rfc3986.txt>~~
 195 ~~<http://www.ietf.org/rfc/rfc3986.txt>~~

196 **[UBL-20]** OASIS Standard, "Universal Business Language (UBL) v2.0", 12 December 2006
 197 ~~<http://docs.oasis-open.org/ubl/os-UBL-2.0/UBL-2.0.pdf>~~~~[http://docs.oasis-](http://docs.oasis-open.org/ubl/os-UBL-2.0/UBL-2.0.pdf)~~
 198 ~~[open.org/ubl/os-UBL-2.0/UBL-2.0.pdf](http://docs.oasis-open.org/ubl/os-UBL-2.0/UBL-2.0.pdf)~~

199 **[UBL-20-cbc]** Universal Business Language (UBL) v2.0, Common Basic Components, October
 200 2006.
 201 ~~[http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-2.0.xsd)~~
 202 ~~[CommonBasicComponents-2.0.xsd](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-2.0.xsd)~~
 203 ~~[http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-2.0.xsd)~~
 204 ~~[CommonBasicComponents-2.0.xsd](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-2.0.xsd)~~

205 **[UBL-20-udt]** Universal Business Language (UBL) v2.0. Unqualified Data Type, February
 206 2005.
 207 ~~[http://docs.oasis-open.org/ubl/os-UBL-](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd)~~
 208 ~~[2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd)~~
 209 ~~[http://docs.oasis-open.org/ubl/os-UBL-](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd)~~
 210 ~~[2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd](http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UnqualifiedDataTypeSchemaModule-2.0.xsd)~~

211 **[XML-Schema1]** W3C Recommendation, "XML Schema Part 1: Structures Second Edition", 28
 212 October 2004.
 213 ~~<http://www.w3.org/TR/2004/REC-xmlschema-1-20041028/>~~
 214 ~~<http://www.w3.org/TR/2004/REC-xmlschema-1-20041028/>~~

215 **[XML-Schema2]** W3C Recommendation, "XML Schema Part 2: Datatypes Second Edition", 28
 216 October 2004.

217 | <http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/>
218 | <http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/>
219 | [CEFACT] CEFACT – Core components specifications ~~http://webster.disa.org/cefact-~~
220 | ~~groups/tmg/Recommendation 9, January~~
221 | ~~1996.~~
222 | http://www.unece.org/cefact/recommendations/rec09/rec09_ecetrd203.pdf

223 1.2.1 Reference

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

- 226 | • UBL 2.0 Common Basic Components (~~UBL-20-cbc~~[UBL-20-cbc](#)), UBL-
227 | CommonBasicComponents-2.0.xsd
- 228 | • UBL 2.0 Unqualified Data Type (~~UBL-20-udt~~),[\(UBL-20-udt\)](#), UnqualifiedDataTypeSchemaModule-
229 | 2.0.xsd

230 This specification is designed to work with the general Web Services framework including WSDL service
231 descriptions, and ~~SOAP~~[SOAP](#) message structure and message processing model. The XML vocabulary
232 defined in this specification should be applicable to any version of ~~SOAP~~[SOAP](#).

233 1.3 Non-Normative References

234 None.

235

236 2 Business Rating Measurement

237 The ~~XML vocabulary for~~ Business Rating ~~of the XML vocabulary~~ is defined in XML Schema ~~format that~~
238 ~~has many for this specification with several specific~~ rating measurement indicators.

239 2.1 Namespaces

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

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

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

244 *Table 41: Prefixes and XML Namespaces used in this specification.*

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

245 2.2 Schema Files

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

248 `http://docs.oasis-open.org/soa-eerp/eerp-rating/200903/eerp-ratingrt/v1.0/EERP-
249 bRating-cd04.xsd`

250 2.3 Rating Measurement Indicators

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

- 253 • ListOfRating element is for the rating aspect of service which is provided by ~~third-party~~rating
254 ~~provider~~ and measured in terms of rates for the service. Each Rating element in the ListOfRating
255 element is issued by a rating ~~provider, a third party rating~~ organization, that has either an
256 aggregated numeric number or an aggregated classification description to represent the rating
257 measurement of the given business service.
- 258 • Credentials element is for the rating aspect of service which is measured in terms of credentials
259 for the service that the service provider owns or holds. Credentials are issued by organizations
260 ~~for~~regulating the service, such as licenses, permissions, certifications, associations, affiliations,
261 etc. Each credential element in the Credentials element is a non-aggregated indicator for the
262 rating measurement of the given business service, and it does not provide an aggregated value
263 for the measurement.
- 264 • Any additional elements for the rating aspect of service. ~~This can~~For example, this could be one
265 or more elements of Performance: ~~QualityAssestionEvaluation~~QualityAssertionEvaluation that will
266 ~~provider provide~~ a mechanism for Service Rating Entities to ~~provide-render~~ their evaluation for
267 how well the ~~Service-Provider fulfill~~provider fulfills the Quality Assertion(s) of its service.

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

274 Syntax

```
275 <rt:BRating xmlns:rt="..." ...>
276   <rt:ListOfRating ...>rt:ListOfRatingType</rt:ListOfRating> ?
277   <rt:Credentials ...>rt:CredentialsType</rt:Credentials> ?
278   ...
279 </rt:BRating >
```

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

281 /rt:BRating

282 The root element of Rating for EERP

283 /rt:BRating/@{any}

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

287 /rt:BRating/rt:ListOfRating

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

290 /rt:BRating/rt:ListOfRating/@{any}

291 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
292 to the ListOfRating element in the future. Unrecognized attributes MAY cause a fault or be silently
293 ~~ignore~~ignored.

294 /rt:BRating/rt:Credentials

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

298 /rt:BRating/rt:Credentials/@{any}

299 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
300 to the Credentials element in the future. Unrecognized attributes MAY cause a fault or be silently
301 ~~ignore~~ignored.

302 /-rt:BRating-/rt:BRatingExtension

303 BRatingExtension element is an optional element that keeps different (extensible) elements to be
304 specified in the future.
305 /rt:BRating/rt:BRatingExtension{any}
306 This is an extensibility mechanism to allow different (extensible) elements/~~parameters~~ to be
307 specified in the future. Unrecognized elements MAY cause a fault or be silently ~~ignore~~ignored.
308 This can be one or more elements of
309 /rt:BRaing/rt:BRatingExtension/Performance/QualityAssestionEvaluationQualityAssertionEvaluati
310 on for third-party Service Rating Entities to provide their evaluation for how well the ~~Service~~
311 ~~Provider~~provider fulfill the Quality Assertion(s) of this service.

3 ListOfRating

The ListOfRating element contains the list of Rating issued by a ~~third party rating organization. Rating Provider. The Rating Provider is a party unaffiliated with either the requester or the target of the rating request, such as a third party rating organization, given a reference to a particular business service and provider, issues either a number or a classification description for rating.~~ Each Rating element in the ListOfRating has one of the following two elements to represent the rating measurement of the given business service:

- An aggregated number, in <rt:RatingNumeric-> **element**
- An aggregated classification description, in <rt:RatingDescription> **element**

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

Syntax

```
<rt:ListOfRating xmlns:rt="..." ...>
  <rt:Rating Type="..." ... >rt:QualityRatingType
    <rt:RatingIssuer ...>rt:IssuerType
      <rt:IssuerName languageID="...">rt:IssuerNameType</rt:IssuerName> ?
      <rt:IssuerUri ...>rt:RatingUriType</rt:IssuerUri>
      ...
    </rt:RatingIssuer>
    <rt:RatingDescription languageID="..." ... >
      rt:RatingDescriptionType</rt:RatingDescription> ?
    <rt:RatingNumeric ...>rt:RatingNumericType</rt:RatingNumeric> ?
    <rt:RatingDate ...>rt:RatingDateType</rt:RatingDate> ?
    <rt:RatingReferenceUri ...>rt:RatingUriType</rt:RatingReferenceUri> ?
    ...
  </rt:Rating> +
</rt:ListOfRating>
```

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

/rt:BRating/rt:ListOfRating

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

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

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

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

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

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

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

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

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

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

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

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

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

360 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerUri

361 It is the URI that represent the issuer organization. It is a required element for RatingIssuer.

362 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingIssuer/rt:IssuerUri/@{any}

363 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
364 to the IssuerUri element in the future. Unrecognized attributes MAY cause a fault or be silently
365 ~~ignore~~ignored.

366 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription

367 Rating description for the rating where the rating can be represented in String format, such as
368 Good, Fair, Average, etc. It is an optional element for Rating.

369 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription/@languageID

370 Language ID is a required attribute in the RatingDescription element, using xsd:language type.
371 The value can be found on defined in urn:un:unece:unefact:codelist:specification:5639:1988.

372 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDescription/@{any}

373 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
374 to the RatingDescription element in the future. Unrecognized attributes MAY cause a fault or be
375 silently ~~ignore~~ignored.

376 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingNumeric

377 RatingNumeric element, Numeric value for the rating, is an optional element for Rating.

378 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingNumeric/@{any}

379 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
380 to the RatingNumeric element in the future. Unrecognized attributes MAY cause a fault or be
381 silently ~~ignore~~ignored.

382 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate

383 RatingDate is the date when this Rating is obtained. It is an optional element for Rating.

384 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate/@Expired

385 Expired is an optional attribute to indicate this Rating is expired or not. The value of this Expired
386 attribute is set to true means this Rating has been expired as of the RatingDate.

387 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingDate/@{any}

388 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
389 to the RatingDate element in the future. Unrecognized attributes MAY cause a fault or be silently
390 ~~ignore~~ignored.

391 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingReferenceUri

392 RatingReferenceUri, Web page URL or other URI for this rating to reference to, is an optional
393 element for the Rating element.

394 /rt:BRating/rt:ListOfRating/rt:Rating/rt:RatingReferenceUri/@{any}

395 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
396 to the Rating element in the future. Unrecognized attributes MAY cause a fault or be silently
397 ~~ignore~~ignored.

398 **ExampleExamples**

399 The following non-normative example illustrates the use of List of Rating element. It describes a Rating
400 element that is issued by Better Business Bureau:

401

```
402 (001) <?xml version="1.0" encoding="utf-8"?>  
403 (002) <ListOfRating xmlns="..." ...>
```

```

404 (003) <Rating Type="BBB">
405 (004) <RatingIssuer>
406 (005) <IssuerName languageID="EN">Better Business Bureau, Inc.
407 </IssuerName>
408 (006) <IssuerUri>http://www.bbb.org/business-reviews/ratings/
409 </IssuerUri>
410 (007) </RatingIssuer>
411 (008) <RatingDescription languageID="EN">A+</RatingDescription>
412 (009) <RatingDate>2009-03-08</RatingDate>
413 (010)
414 <RatingReferenceUri>http://goldengate.bbb.org/WWWRoot/Report.aspx?site=99&
415 bbb=1116&firm=34825#bbbrating</RatingReferenceUri>
416 (011) </Rating>
417 (012) </ListOfRating>

```

418

419 | The following **non-normative** example illustrates the use of List of Rating element. It describes a Rating
420 element that is issued by 51Honest.org in China:

421

```

422 (001) <?xml version="1.0" encoding="UTF-8"?>
423 (002) <BRating xmlns="..." ...>
424 (003) <ListOfRating>
425 (004) <Rating Type="51honest">
426 (005) <RatingIssuer>
427 (006) <IssuerName languageID="zh-CN">农博网</IssuerName>
428 (007) <IssuerUri >www.51honet.org</IssuerUri>
429 (008) </RatingIssuer>
430 (009) <RatingDescription languageID="zh-CN">信星计划</RatingDescription>
431 (010) <RatingNumeric>175</RatingNumeric>
432 (011) <RatingDate>2009-03-06</RatingDate>
433 (012) <RatingReferenceUri
434 >http://www.51honest.org/index.jsp?url=detail.credit%3faction=hywzMemberInfo%2
435 6credcode=300001000036803
436 (013) </RatingReferenceUri>
437 (014) </Rating>
438 (015) </ListOfRating>
439 (016) </BRating>

```

440

4 Rating Credentials

441

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

444 Credentials ~~may be issued with respect to a service provider and service by third party organizations,~~
445 such as licenses, permissions, certifications, awards, associations, and affiliations —, are issued with
446 respect to a service provider and its services by organizations that regulate the service. They are different
447 from the credentials for authentication in the security term. Credentials demonstrate the credibility of a
448 given service offered by a service provider.

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

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

453 Syntax

```
454 <rt:Credentials xmlns:bqos="..." ...>  
455   <rt:Credential>rt:CredentialType  
456     <rt:CredentialIssuer ...>rt:IssuerType  
457       <rt:IssuerName languageID="..." >rt:IssuerNameType</rt:IssuerName> ?  
458       <rt:IssuerUri ...>rt:RatingUriType</rt:IssuerUri>  
459       ...  
460     </rt:CredentialIssuer>  
461     <rt:CredentialClass languageID="..." ...>  
462       rt:CredentialClassType</rt:CredentialClass> ?  
463     <rt:License languageID="..." ...>rt:LisenseType</rt:License> ?  
464     <rt:CredentialDate ...>rt:CredentialDateType  
465       <rt>DateIssued ...>rt>DateIssuedType</rt>DateIssued> ?  
466       <rt:ExpirationDate ...>rt:ExpirationDateType</rt:ExpirationDate> ?  
467     </rt:CredentialDate> ?  
468     <rt:CredentialReferenceUri ...>  
469       rt:RatingUriType</rt:CredentialReferenceUri> ?  
470     ...  
471   </rt:Credential> +  
472 </rt:Credentials>
```

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

474 /rt:BRating/rt:Credentials

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

477 /rt:BRating/rt:Credentials/rt:Credential

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

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

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

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

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

485 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
486 to the Credential element in the future. Unrecognized attributes MAY cause a fault or be silently
487 ignore-ignored.

488 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer
489 CredentialIssuer element is for issuing organization for this credential, such as the issuer of
490 certification, association, affiliation or Credential. For example, the Issuer can be AAA, BBB, or
491 State of California, etc. This element is a required element for Credential, which includes the
492 issuer name and the URI that represent this rating issuer organization.

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

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

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

501 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/rt:IssuerUri/@{any}
502 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
503 to the IssuerUri element in the future. Unrecognized attributes MAY cause a fault or be silently
504 ~~ignore-ignored~~.

505 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialIssuer/{any}
506 This is an extensibility mechanism to allow different (extensible) property or attribute
507 elements/~~parameters~~ to be specified in the future. Unrecognized elements MAY cause a fault or
508 be silently ~~ignore-ignored~~.

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

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

515 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialClass/@{any}
516 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
517 to the CredentialClass element in the future. Unrecognized attributes MAY cause a fault or be
518 silently ~~ignore-ignored~~.

519 /rt:BRating/rt:Credentials/rt:Credential/rt:License
520 License element, the license number or membership number of the credential, is an optional
521 element for the Credential element.

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

525 /rt:BRating/rt:Credentials/rt:Credential/rt:License/@{any}
526 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
527 to the License element in the future. Unrecognized attributes MAY cause a fault or be silently
528 ~~ignore-ignored~~.

529 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate
530 CredentialDate element is the date on this credential, including date when this credential, license
531 or certificate is issued and the expiration date for this license or membership. It is an optional
532 element for the Credential element.

533 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/@{any}

534 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
535 to the CredentialDate element in the future. Unrecognized attributes MAY cause a fault or be
536 silently ignore-ignored.

537 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:Datelssued

538 Datelssued element is the date when this credential, license or certificate is issued. It is an
539 optional element for the CredentialDate element.

540 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:Datelssued/@{any}

541 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
542 to the Datelssued element in the future. Unrecognized attributes MAY cause a fault or be silently
543 ignore-ignored.

544 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:ExpirationDate

545 ExpirationDate element, Expiration date for this license or membership, is an optional element for
546 the CredentialDate element.

547 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialDate/rt:ExpirationDate/@{any}

548 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
549 to the ExpirationDate element in the future. Unrecognized attributes MAY cause a fault or be
550 silently ignore-ignored.

551 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialReferenceUri

552 CredentialReferenceUri element, Web page URL or other URI for this credential reference, is an
553 optional element for Credential.

554 /rt:BRating/rt:Credentials/rt:Credential/rt:CredentialReferenceUri/@{any}

555 This is an extensibility mechanism to allow additional attributes, based on schemas, to be added
556 to the CredentialReferenceUri element in the future. Unrecognized attributes MAY cause a fault
557 or be silently ignore-ignored.

558 /rt:BRating/rt:Credentials/rt:Credential/{any}

559 This is an extensibility mechanism to allow different (extensible) property or attribute
560 elements/parameters to be specified in the future. Unrecognized elements MAY cause a fault or
561 be silently ignore-ignored.

562 **ExampleExamples**

563 The following non-normative example illustrates the use of rating Credentials element. It describes the
564 credential of professional license issued by California Board For Professional Engineers And Land
565 Surveyors:

```
566 (001) <?xml version="1.0" encoding="utf-8"?>
567 (002) <Credentials xmlns="..." ...>
568 (003)   <Credential Type="License">
569 (004)     <CredentialIssuer>
570 (005)       <IssuerName languageID="EN">California Board For Professional
571 Engineers And Land Surveyors </IssuerName>
572 (006)       <IssuerUri>http://www.pels.ca.gov/</IssuerUri>
573 (007)     </CredentialIssuer>
574 (008)     <CredentialClass languageID="EN">CIVIL ENGINEER</CredentialClass>
575 (009)     <License languageID="EN">42456</License>
576 (010)     <CredentialDate>
577 (011)       <ExpirationDate>2010-03-31</ExpirationDate>
578 (012)     </CredentialDate>
579 (013)   </Credential>
580 <CredentialReferenceUri>http://www2.dca.ca.gov/pls/wllpub/WLLQRYNA$LCEV2.Query
581 View?P_LICENSE_NUMBER=42456&amp;P_LTE_ID=741</CredentialReferenceUri>
582 (014)   </Credential>
583 (015) </Credentials>
```

584 The following non-normative example illustrates the use of rating Credentials element. It describes the
585 credential of member of ASCE:


```

586 (001) <?xml version="1.0" encoding="utf-8"?>
587 (002) <Credentials xmlns="..." ...>
588 (003)   <Credential Type="Membership">
589 (004)     <CredentialIssuer>
590 (005)       <IssuerName languageID="EN">American Society of Civil Engineers
591 </IssuerName>
592 (006)       <IssuerUri>http://www.asce.org/</IssuerUri>
593 (007)     </CredentialIssuer>
594 (008)     <CredentialClass languageID="EN">Member</CredentialClass>
595 (009)     <CredentialDate>
596 (010)       <DateIssued>1987-08-13</DateIssued>
597 (011)       <ExpirationDate>2010-12-31</ExpirationDate>
598 (012)     </CredentialDate>
599 (013)   </Credential>
600 (014) </Credentials>

```

601 | The following non-normative example illustrates the use of rating Credentials element. It describes the
602 credential of Association type issued by Better Business Bureau, Inc.:

```

603 (001) <?xml version="1.0" encoding="utf-8"?>
604 (002) <Credentials xmlns="..." ...>
605 (003)   <Credential Type="Association">
606 (004)     <CredentialIssuer>
607 (005)       <IssuerName languageID="EN">Better Business Bureau, Inc.
608 </IssuerName>
609 (006)       <IssuerUri>http://goldengate.bbb.org/</IssuerUri>
610 (007)     </CredentialIssuer>
611 (008)     <CredentialClass languageID="EN">3</CredentialClass>
612 (009)     <CredentialReferenceUri>http://www.res99.com/hotel/10021453-
613 102008020.html?ses=1e65c27bad81e82b07a39070fed04d87</CredentialReferenceUri>
614 (010)   </Credential>
615 (011) </Credentials>

```

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5 Rating Examples

The examples in this section are non-normative.

5.1 Service Rating **withfor** an Engineering Service

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:

- ~~1.~~ The service is classified as A+ by BBB (Better Business Bureau, Inc.), as of May 8th, 2009.
- ~~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.
- ~~3.~~ In addition, 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.

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

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

```

670      (39)          <DateIssued>1987-08-13</DateIssued>
671      (40)          <ExpirationDate>2010-12-31</ExpirationDate>
672      (41)          </CredentialDate>
673      (42)          </Credential>
674      (43)          </Credentials>
675      (44)         </BRating>

```

676 5.2 Service Rating for Gas-Meters Product

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

679 The Rating message has the following contents:

- 680 1) ~~1)~~ Credit rating on this provider is 980.1, rated by 51Honest.org
681 (~~<http://www.51Honest.org>~~<http://www.51Honest.org>), a third-party organization in China
- 682 2) ~~2)~~ License on gas-meter production is issued in December, 1997, by a department in
683 government that is Zhejiang Bureau of Quality and Technical Supervision in the China
684 (~~<http://www.zjbts.gov.cn>~~<http://www.zjbts.gov.cn/>).
- 685 3) ~~3)~~ Certificate on gas-meter product is certificated as the first Dual-Explosion-Proof Certificate in
686 November 1997, Certificate is issued by a third-party organization, National Supervision and
687 Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI) in Shanghai, China
688 (~~<http://www.sipai.com/sitiiias/nepsi.asp>~~<http://www.sipai.com/sitiiias/nepsi.asp>)

```

689      (01) (1) <?xml version="1.0" encoding="UTF-8"?>
690      (02) (2) <BRating xmlns="...">
691      (03) (3) <ListOfRating>
692      (04) (4) <Rating Type="Credit">
693      (05) (5) <RatingIssuer>
694      (06) (6) <IssuerName languageID="zh-CN">信星计划
695      51Honest.org</IssuerName>
696      (07) (7) <IssuerUri>http://www.51Honest.org</IssuerUri>
697      (08) (8) </RatingIssuer>
698      (09) (9) <RatingNumeric>980.1</RatingNumeric>
699      (10) <RatingDate>2009-04-31</RatingDate>
700      (11) <RatingReferenceUri/>
701      (12) </Rating>
702      (13) </ListOfRating>
703      (14) <Credentials>
704      (15) <Credential Type="License">
705      (16) <CredentialIssuer>
706      (17) <IssuerName languageID="zh-CN">浙江省质量技术监督局</IssuerName>
707      (18) <IssuerUri>http://www.zjbts.gov.cn/</IssuerUri>
708      (19) </CredentialIssuer>
709      (20) <CredentialClass languageID="zh-CN">中华人民共和国计量器具生产制造许可证
710      </CredentialClass>
711      (21) <License languageID="en-us">ZJJHJDJ-JL1997120001</License>
712      (22) <CredentialDate>
713      (23) <DateIssued>1997-12-01</DateIssued>
714      (24) </CredentialDate>
715      (25) </Credential>
716      (26) <Credential Type="Certification">
717      (27) <CredentialIssuer>
718      (28) <IssuerName languageID="en">National Supervision and Inspection
719      Center for Explosion Protection and Safety of Instrumentation in
720      Shanghai</IssuerName>
721      (29) <IssuerUri>http://www.sipai.com/sitiiias/nepsi.asp</IssuerUri>
722      (30) </CredentialIssuer>
723      (31) <CredentialClass languageID="en">The first Dual-Explosion-Proof
724      Certificate</CredentialClass>
725      (32) <License languageID="en-us">NEPSI-FB1997110001</License>
726      (33) <CredentialDate>
727      (34) <DateIssued>1997-11-01</DateIssued>

```

```
728      (35)      </CredentialDate>
729      (36)      </Credential>
730      (37)      </Credentials>
731      (38)      </BRating>
```

732

6 Conformance

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

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

742 Normative text within this specification takes precedence over normative outlines (as described in section
743 1.4.1), which in turn take precedence over the XML Schema [XML Schema Part 1, Part 2] and WSDL
744 [WSDL 1.1] descriptions. That is, the normative text in this specification further constrains the schemas
745 and/or WSDL that are part of this specification; and this specification contains further constraints on the
746 elements defined in referenced schemas.

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

```
751 (001) <?xml version="1.0" encoding="utf-8"?>  
752 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">  
753 (003) <ListOfRating>  
754 (004) <Rating>  
755 (005) <RatingIssuer>  
756 (006) <IssuerUri>http://www.sample-rating-issuer.org</IssuerUri>  
757 (007) </RatingIssuer>  
758 (008) . . .  
759 (009) </Rating>  
760 (010) </ListOfRating>  
761 (011) </BRating>
```

762 Or like this:

```
763 (001) <?xml version="1.0" encoding="utf-8"?>  
764 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">  
765 (003) <Credentials>  
766 (004) <Credential>  
767 (005) <CredentialIssuer>  
768 (006) <IssuerUri>http://www.sample-cred-issuer.com</IssuerUri>  
769 (007) </CredentialIssuer>  
770 (008) . . .  
771 (009) </Credential>  
772 (010) </Credentials>  
773 (011) </BRating>
```

774 The following nearly empty artifacts do not conform to this specification:

```
775 (001) <?xml version="1.0" encoding="utf-8"?>  
776 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">  
777 (003) <ListOfRating/>
```

778 (004) </BRating>

779 The following nearly empty artifacts do not conform to this specification, either:

780 (001) <?xml version="1.0" encoding="utf-8"?>

781 (002) <BRating xmlns="http://docs.oasis-open.org/ns/soa-eerp/rt/200903">

782 (003) <Credentials/>

783 (004) </BRating>

784 This specification defines a number of extensions; compliant services are NOT REQUIRED to implement
785 those extensions defined in this specification. However, if a service implements an aspect of the
786 specification, it MUST comply with the requirements specified (e.g. related "MUST" statements). If an
787 implementation silently ~~ignore~~ignores unrecognized attributes where any attribute is allowed, or silently
788 ~~ignore~~ignores unrecognized elements where any element is allowed, should be considered as an
789 interoperable implementation.

790 A. Acknowledgements

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793 | **Participants**:

794

795	Rex Brooks	Individual
796	Szu Chang	Changfeng Open Standards Platform Software Alliance
797	William Cox	Individual
798	Andy Lee	Changfeng Open Standards Platform Software Alliance
799	Carl Mattocks	Individual
800	<u>Yulin Xu</u>	<u>Changfeng Open Standards Platform Software Alliance</u>
801	<u>Paul Yang</u>	<u>Changfeng Open Standards Platform Software Alliance</u>
802	James Zhili Zhang	TIBCO Software Inc.
803	Hong Zhou	Changfeng Open Standards Platform Software Alliance

804

B. XML Schema for Business Rating

805 Note: The separate machine readable schema document, listed on Section 2.2, is normative. The text
806 included here is non-normative.

```
807 <?xml version="1.0" encoding="UTF-8"?>
808 <!--
809 Document Type: EERP-Rating CD03CD04
810 Create On: 01/0609/12/2010
811 -->
812 <!-- ===== xsd:schema Element With Namespaces Declarations ===== -->
813 <!-- ===== Copyright Notice ===== -->
814 <!--
815 OASIS takes no position regarding the validity or scope of any
816 intellectual property or other rights that might be claimed to pertain
817 to the implementation or use of the technology described in this
818 document or the extent to which any license under such rights
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856 EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY
857 WARRANTY THAT THE USE OF THE INFORMATION HEREIN
858 WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED
859 WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A
860 PARTICULAR PURPOSE.
861 -->
862 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://docs.oasis-
863 open.org/ns/soa-eerp/rt/200903" xmlns:eerp="http://docs.oasis-open.org/ns/soa-eerp/rt/200903"
864 xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
865 xmlns:udt="urn:un:unece:uncefact:data:specification:UnqualifiedDataTypesSchemaModule:2"
866 xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:rt="http://docs.oasis-open.org/ns/soa-
867 eerp/rt/200903" targetNamespace="http://docs.oasis-open.org/ns/soa-eerp/rt/200903"
868 elementFormDefault="qualified" attributeFormDefault="unqualified" version="1.0">
869 <!-- ===== Imports ===== -->
```



```

871     <xsd:import namespace="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
872     schemaLocation="http://docs.oasis-open.org/ubl/os-UBL-2.0/xsd/common/UBL-CommonBasicComponents-
873     2.0.xsd"/>
874     <xsd:import
875     namespace="urn:un:unece:uncefact:data:specification:UnqualifiedDataTypesSchemaModule:2"
876     schemaLocation="http://docs.oasis-open.org/ubl/os-UBL-
877     2.0/xsd/common/UnqualifiedDataTypesSchemaModule-2.0.xsd"/>
878     <!-- ===== Root Element ===== -->
879     <xsd:element name="BRating" type="BRatingType">
880         <xsd:annotation>
881             <xsd:documentation>The BRating is the root element of Business Rating for EERP which is for
882             business reliability and reputation of the service and its services provider. It has both
883             ListOfRating and Credentials elements which are indicators to represent for business reliability
884             and reputation of the service and its services provider. </xsd:documentation>
885         </xsd:annotation>
886     </xsd:element>
887     <!-- ===== Element Declarations ===== -->
888     <xsd:element name="Credential" type="CredentialType">
889         <xsd:annotation>
890             <xsd:documentation>The Credential element is for each credential, certification,
891             affiliation or association that the service provider has for the service. </xsd:documentation>
892         </xsd:annotation>
893     </xsd:element>
894     <xsd:element name="CredentialClass" type="CredentialClassType">
895         <xsd:annotation>
896             <xsd:documentation>CredentialClass element is the classification of the credential such as
897             five-stars, or golden member. </xsd:documentation>
898         </xsd:annotation>
899     </xsd:element>
900     <xsd:element name="CredentialDate" type="CredentialDateType">
901         <xsd:annotation>
902             <xsd:documentation>CredentialDate element is the date on this credential, including date
903             when this credential, license or certificate is issued and the expiration date for this license
904             or membership. </xsd:documentation>
905         </xsd:annotation>
906     </xsd:element>
907     <xsd:element name="CredentialIssuer" type="IssuerType">
908         <xsd:annotation>
909             <xsd:documentation>Name of affiliations or associations</xsd:documentation>
910         </xsd:annotation>
911     </xsd:element>
912     <xsd:element name="Credentials" type="CredentialsType">
913         <xsd:annotation>
914             <xsd:documentation>The Rating Credentials element for EERP-Rating, describes the
915             credentials held by the service provider with respect to a specific service.
916             Credentials may be issued with respect to a service provider and service by third-party
917             organizations, such as licenses, permissions, certifications, awards, associations, and
918             affiliations.
919         </xsd:documentation>
920     </xsd:annotation>
921 </xsd:element>
922     <xsd:element name="DateIssued" type="DateIssuedType">
923         <xsd:annotation>
924             <xsd:documentation>The date when this credential, license or certificate was
925             issued</xsd:documentation>
926         </xsd:annotation>
927     </xsd:element>
928     <xsd:element name="ExpirationDate" type="ExpirationDateType">
929         <xsd:annotation>
930             <xsd:documentation>Expiration date for this license or membership</xsd:documentation>
931         </xsd:annotation>
932     </xsd:element>
933     <xsd:element name="IssuerName" type="IssuerNameType">
934         <xsd:annotation>
935             <xsd:documentation>Name for the issuing organization for the rating or
936             credential</xsd:documentation>
937         </xsd:annotation>
938     </xsd:element>
939     <xsd:element name="IssuerUri" type="RatingUriType">
940         <xsd:annotation>
941             <xsd:documentation>the URI that represent the issuer organization. </xsd:documentation>
942         </xsd:annotation>
943     </xsd:element>

```

```

944 <xsd:element name="License" type="LicenseType">
945 <xsd:annotation>
946 <xsd:documentation>License number </xsd:documentation>
947 </xsd:annotation>
948 </xsd:element>
949 <xsd:element name="ListOfRating" type="ListOfRatingType">
950 <xsd:annotation>
951 <xsd:documentation>The ListOfRating element contains the list of Rating issued by a third
952 party rating organization. Each Rating element in the ListOfRating has one of the two elements to
953 represent the rating measurement of the given business service: 1) - an aggregated number, in
954 RatingNumeric element. 2) - an aggregated classification description, in RatingDescription
955 element </xsd:documentation>
956 </xsd:annotation>
957 </xsd:element>
958 <xsd:element name="Rating" type="RatingType">
959 <xsd:annotation>
960 <xsd:documentation>The Rating element represents a rating measurement of the given business
961 service. The rating measurement is issued by a third party rating organization.
962 </xsd:documentation>
963 </xsd:annotation>
964 </xsd:element>
965 <xsd:element name="RatingDescription" type="RatingDescriptionType">
966 <xsd:annotation>
967 <xsd:documentation>Rating description for the rating where the rating can be represented in
968 String format, such as Good, Fair, Average, etc.</xsd:documentation>
969 </xsd:annotation>
970 </xsd:element>
971 <xsd:element name="RatingDate" type="RatingDateType">
972 <xsd:annotation>
973 <xsd:documentation>Date when this Rating is obtained</xsd:documentation>
974 </xsd:annotation>
975 </xsd:element>
976 <xsd:element name="RatingIssuer" type="IssuerType">
977 <xsd:annotation>
978 <xsd:documentation>Issuing organization for this quality/rating, including the issuer name
979 and the URI that represent this rating issuer organization </xsd:documentation>
980 </xsd:annotation>
981 </xsd:element>
982 <xsd:element name="RatingNumeric" type="RatingNumericType">
983 <xsd:annotation>
984 <xsd:documentation>Rating numeric number</xsd:documentation>
985 </xsd:annotation>
986 </xsd:element>
987 <xsd:element name="RatingReferenceUri" type="RatingUriType">
988 <xsd:annotation>
989 <xsd:documentation>Web page URL or other URI for this rating to reference
990 to.</xsd:documentation>
991 </xsd:annotation>
992 </xsd:element>
993 <!-- Extension -->
994 <xsd:element name="ExtensionBRaingExtension">
995 <xsd:complexType mixed="true">
996 <xsd:choice minOccurs="0" maxOccurs="unbounded">
997 <xsd:any processContents="skip" minOccurs="0" maxOccurs="unbounded"/>
998 </xsd:choice>
999 <xsd:attribute name="optional" type="xsd:boolean" use="optional" default="true"/>
1000 </xsd:complexType>
1001 </xsd:element>
1002 <!-- ===== Type Definitions ===== -->
1003 <xsd:complexType name="CredentialClassType">
1004 <xsd:annotation>
1005 <xsd:documentation>Complex type for membership classification </xsd:documentation>
1006 </xsd:annotation>
1007 <xsd:simpleContent>
1008 <xsd:extension base="cbc:NameType">
1009 <xsd:anyAttribute namespace="##any" processContents="lax"/>
1010 </xsd:extension>
1011 </xsd:simpleContent>
1012 </xsd:complexType>
1013 <xsd:complexType name="CredentialDateType">
1014 <xsd:annotation>
1015 <xsd:documentation>Complex type for the date on this credential </xsd:documentation>
1016 </xsd:annotation>

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1017     <xsd:sequence>
1018         <xsd:element ref="DateIssued" minOccurs="0">
1019             <xsd:annotation>
1020                 <xsd:documentation>The date wen this credential, license or certificate is
1021 issued</xsd:documentation>
1022             </xsd:annotation>
1023         </xsd:element>
1024         <xsd:element ref="ExpirationDate" minOccurs="0">
1025             <xsd:annotation>
1026                 <xsd:documentation>Expiration date for this Rating, license or
1027 membership</xsd:documentation>
1028             </xsd:annotation>
1029         </xsd:element>
1030     </xsd:sequence>
1031     <xsd:anyAttribute namespace="##any" processContents="lax"/>
1032 </xsd:complexType>
1033 <xsd:complexType name="CredentialsType">
1034     <xsd:annotation>
1035         <xsd:documentation>Complex type for Credentials and association</xsd:documentation>
1036     </xsd:annotation>
1037     <xsd:sequence>
1038         <xsd:element ref="Credential" maxOccurs="unbounded">
1039             <xsd:annotation>
1040                 <xsd:documentation>The Credential element is for each credential, certification,
1041 affiliation or association that the service provider has for the service. This is a required
1042 element for the Credentials element. </xsd:documentation>
1043             </xsd:annotation>
1044         </xsd:element>
1045     </xsd:sequence>
1046     <xsd:anyAttribute namespace="##any" processContents="lax"/>
1047 </xsd:complexType>
1048 <xsd:complexType name="CredentialType">
1049     <xsd:annotation>
1050         <xsd:documentation>Complex type for one credential or association</xsd:documentation>
1051     </xsd:annotation>
1052     <xsd:sequence>
1053         <xsd:element ref="CredentialIssuer">
1054             <xsd:annotation>
1055                 <xsd:documentation>Issuing organization for this credential, such as the name of
1056 certification, association, affiliation or credential, such as AAA, BBB, or State of California,
1057 including the issuer name and the URI that represent this rating issuer organization.
1058 </xsd:documentation>
1059             </xsd:annotation>
1060         </xsd:element>
1061         <xsd:element ref="CredentialClass" minOccurs="0">
1062             <xsd:annotation>
1063                 <xsd:documentation>CredentialClass element is the classification of the credential such
1064 as five-stars, or golden member. It is an optional element for the
1065 Credential.</xsd:documentation>
1066             </xsd:annotation>
1067         </xsd:element>
1068         <xsd:element ref="License" minOccurs="0">
1069             <xsd:annotation>
1070                 <xsd:documentation>License element, the license number or membership number of the
1071 credential, is an optional element for the Credential element.</xsd:documentation>
1072             </xsd:annotation>
1073         </xsd:element>
1074         <xsd:element ref="CredentialDate" minOccurs="0"/>
1075         <xsd:element name="CredentialReferenceUri" type="RatingUriType" minOccurs="0">
1076             <xsd:annotation>
1077                 <xsd:documentation>CredentialReferenceUri element, Web page URL or other URI for this
1078 credential reference, is an optional element for Credential. </xsd:documentation>
1079             </xsd:annotation>
1080         </xsd:element>
1081         <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
1082     </xsd:sequence>
1083     <xsd:attribute name="Type" type="CrendtialTypeEnum" use="optional"/>
1084     <xsd:anyAttribute namespace="##any" processContents="lax"/>
1085 </xsd:complexType>
1086 <xsd:complexType name="DateIssuedType">
1087     <xsd:annotation>
1088         <xsd:documentation>Complex type of the date when this certificate or license is
1089 issued</xsd:documentation>

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1090     </xsd:annotation>
1091     <xsd:simpleContent>
1092         <xsd:extension base="cbc:StartDateType">
1093             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1094         </xsd:extension>
1095     </xsd:simpleContent>
1096 </xsd:complexType>
1097 <xsd:complexType name="BRatingType">
1098     <xsd:annotation>
1099         <xsd:documentation>Complex type for the EERP-Rating</xsd:documentation>
1100     </xsd:annotation>
1101     <xsd:sequence>
1102         <xsd:element ref="ListOfRating" minOccurs="0">
1103             <xsd:annotation>
1104                 <xsd:documentation>ListOfRating element is for the rating aspect of service which is
1105 provided by third party and measured in terms of rates for the service. Each Rating element in
1106 the ListOfRating element is issued by a rating organization that has either an aggregated numeric
1107 number or an aggregated classification description to represent the rating measurement of the
1108 given business service.</xsd:documentation>
1109             </xsd:annotation>
1110         </xsd:element>
1111         <xsd:element ref="Credentials" minOccurs="0">
1112             <xsd:annotation>
1113                 <xsd:documentation>Credentials element is for the rating aspect of service which is
1114 measured in terms of credentials for the service that the service provider owns or holds.
1115 Credentials are issued by organizations for the service, such as licenses, permissions,
1116 certifications, associations, affiliations, etc. Each credential element in the Credentials
1117 element is a non-aggregated indicator for the rating measurement of the given business service,
1118 and it does not provide an aggregated value for the measurement.</xsd:documentation>
1119             </xsd:annotation>
1120         </xsd:element>
1121         <xsd:element ref="ExtensionBRaingExtension" minOccurs="0" maxOccurs="unbounded"/>
1122     </xsd:sequence>
1123     <xsd:anyAttribute namespace="##any" processContents="lax"/>
1124 </xsd:complexType>
1125 <xsd:complexType name="ExpirationDateType">
1126     <xsd:annotation>
1127         <xsd:documentation>Complex type of expiration date</xsd:documentation>
1128     </xsd:annotation>
1129     <xsd:simpleContent>
1130         <xsd:extension base="cbc:ExpiryDateType">
1131             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1132         </xsd:extension>
1133     </xsd:simpleContent>
1134 </xsd:complexType>
1135 <xsd:complexType name="IssuerNameType">
1136     <xsd:annotation>
1137         <xsd:documentation>Complex type for the Rating issuer name</xsd:documentation>
1138     </xsd:annotation>
1139     <xsd:simpleContent>
1140         <xsd:extension base="cbc:NameType"/>
1141     </xsd:simpleContent>
1142 </xsd:complexType>
1143 <xsd:complexType name="IssuerType">
1144     <xsd:annotation>
1145         <xsd:documentation>Complex type for issuing organization, including the issuer name and the
1146 URI that represent this rating issuer organization. </xsd:documentation>
1147     </xsd:annotation>
1148     <xsd:sequence>
1149         <xsd:element ref="IssuerName" minOccurs="0">
1150             <xsd:annotation>
1151                 <xsd:documentation>Name for the issuing organization for this rating or
1152 credential</xsd:documentation>
1153             </xsd:annotation>
1154         </xsd:element>
1155         <xsd:element ref="IssuerUri">
1156             <xsd:annotation>
1157                 <xsd:documentation>The URI that represent the issuer organization. </xsd:documentation>
1158             </xsd:annotation>
1159         </xsd:element>
1160     <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
1161 </xsd:sequence>
1162 <xsd:anyAttribute namespace="##any" processContents="lax"/>

```

```

1163     </xsd:complexType>
1164     <xsd:complexType name="LicenseType">
1165       <xsd:annotation>
1166         <xsd:documentation>Complex type for the license number or membership
1167 number</xsd:documentation>
1168       </xsd:annotation>
1169       <xsd:simpleContent>
1170         <xsd:extension base="cbc:NameType">
1171           <xsd:anyAttribute namespace="##any" processContents="lax"/>
1172         </xsd:extension>
1173       </xsd:simpleContent>
1174     </xsd:complexType>
1175     <xsd:complexType name="ListOfRatingType">
1176       <xsd:annotation>
1177         <xsd:documentation>Complex type for ListOfRating </xsd:documentation>
1178       </xsd:annotation>
1179       <xsd:sequence>
1180         <xsd:element ref="Rating" maxOccurs="unbounded">
1181           <xsd:annotation>
1182             <xsd:documentation>The Rating element represents a rating measurement of the given
1183 business service. The rating measurement is issued by a third party rating organization.
1184 </xsd:documentation>
1185           </xsd:annotation>
1186         </xsd:element>
1187       </xsd:sequence>
1188       <xsd:anyAttribute namespace="##any" processContents="lax"/>
1189     </xsd:complexType>
1190     <xsd:complexType name="RatingDescriptionType">
1191       <xsd:annotation>
1192         <xsd:documentation>Complex type for the description of the Rating</xsd:documentation>
1193       </xsd:annotation>
1194       <xsd:simpleContent>
1195         <xsd:extension base="cbc:NameType">
1196           <xsd:anyAttribute namespace="##any" processContents="lax"/>
1197         </xsd:extension>
1198       </xsd:simpleContent>
1199     </xsd:complexType>
1200     <xsd:complexType name="RatingDateType">
1201       <xsd:annotation>
1202         <xsd:documentation>Complex type of the date when this Rating is
1203 obtained</xsd:documentation>
1204       </xsd:annotation>
1205       <xsd:simpleContent>
1206         <xsd:extension base="cbc:ExpiryDateType">
1207           <xsd:attribute name="Expired" type="xsd:boolean" use="optional" default="false"/>
1208           <xsd:anyAttribute namespace="##any" processContents="lax"/>
1209         </xsd:extension>
1210       </xsd:simpleContent>
1211     </xsd:complexType>
1212     <xsd:complexType name="RatingNumericType">
1213       <xsd:annotation>
1214         <xsd:documentation>Complex type of Rating's value number</xsd:documentation>
1215       </xsd:annotation>
1216       <xsd:simpleContent>
1217         <xsd:extension base="udt:NumericType">
1218           <xsd:anyAttribute namespace="##any" processContents="lax"/>
1219         </xsd:extension>
1220       </xsd:simpleContent>
1221     </xsd:complexType>
1222     <xsd:complexType name="RatingType">
1223       <xsd:annotation>
1224         <xsd:documentation>Complex type for Rating for EERP Rating</xsd:documentation>
1225       </xsd:annotation>
1226       <xsd:sequence>
1227         <xsd:element ref="RatingIssuer">
1228           <xsd:annotation>
1229             <xsd:documentation>Issuing organization for this rating, including the issuer name and
1230 the URI that represent this rating issuer organization. </xsd:documentation>
1231           </xsd:annotation>
1232         </xsd:element>
1233         <xsd:element ref="RatingDescription" minOccurs="0">
1234           <xsd:annotation>

```

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1235         <xsd:documentation>Rating description for the rating where the rating can be represented
1236 in String format, such as Good, Fair, Average, etc. It is an optional element for
1237 Rating.</xsd:documentation>
1238     </xsd:annotation>
1239 </xsd:element>
1240 <xsd:element ref="RatingNumeric" minOccurs="0">
1241     <xsd:annotation>
1242         <xsd:documentation>RatingNumeric element, Numeric value for the rating, is an optional
1243 element for Rating.</xsd:documentation>
1244     </xsd:annotation>
1245 </xsd:element>
1246 <xsd:element ref="RatingDate" minOccurs="0">
1247     <xsd:annotation>
1248         <xsd:documentation>Date when this Rating is obtained. It is an optional element for
1249 Rating.</xsd:documentation>
1250     </xsd:annotation>
1251 </xsd:element>
1252 <xsd:element ref="RatingReferenceUri" minOccurs="0">
1253     <xsd:annotation>
1254         <xsd:documentation>RatingReferenceUri, Web page URL or other URI for this rating to
1255 reference to, is an optional element for the Rating element.</xsd:documentation>
1256     </xsd:annotation>
1257 </xsd:element>
1258 <xsd:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
1259 </xsd:sequence>
1260 <xsd:attribute name="Type" type="xs:anySimpleType" use="optional"/>
1261 <xsd:anyAttribute namespace="##any" processContents="lax"/>
1262 </xsd:complexType>
1263 <xsd:complexType name="RatingUriType">
1264     <xsd:annotation>
1265         <xsd:documentation>Complex type for the rating reference URI or Web page
1266 URL</xsd:documentation>
1267     </xsd:annotation>
1268     <xsd:simpleContent>
1269         <xsd:extension base="xsd:anyURI">
1270             <xsd:anyAttribute namespace="##any" processContents="lax"/>
1271         </xsd:extension>
1272     </xsd:simpleContent>
1273 </xsd:complexType>
1274 <xsd:simpleType name="CrendtialTypeEnum">
1275     <xsd:annotation>
1276         <xsd:documentation>Crendtial Type enumeration</xsd:documentation>
1277     </xsd:annotation>
1278     <xsd:restriction base="xsd:string">
1279         <xsd:enumeration value="Affiliation"/>
1280         <xsd:enumeration value="Association"/>
1281         <xsd:enumeration value="Award"/>
1282         <xsd:enumeration value="Certification"/>
1283         <xsd:enumeration value="License"/>
1284         <xsd:enumeration value="Membership"/>
1285         <xsd:enumeration value="Permission"/>
1286         <xsd:enumeration value="Others"/>
1287     </xsd:restriction>
1288 </xsd:simpleType>
1289 </xsd:schema>

```

1290 **C. Non-Normative Text**

1291 None

1292

D. Revision History

1293

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
WD08	05/10/2010	Szu Chang	Changed after the public review comments
WD09	06/23/2010	Szu Chang	Changed after the first round of review PR comments
CD04	09/12/2010	Szu Chang	TC approved, changed from WS09 to CD04

1294