

**Component Information Profile based on the Component Specification and Quality Information Description Rules of the Component Consortium for EJB(TM) in Japan
(an example of extended RAS profile)**

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This shows an outline of Component Information Profile (an extended RAS profile) based on the Component Specification and Quality Information Description Rules (abbr. Component Information Rules) standardized by the Component Consortium for EJB(TM) in Japan.

1.1 The Component Consortium for EJB and its Component Information Rules

The Component Consortium for EJB (<http://www.ejbcons.gr.jp/en/index.html>) was established in 2000 in order to promote EJB-based components by providing a series of rules and standards, such as Portable Component Rules and Component Information Rules. As of March, 2005, the consortium has 69 member companies. The Component Information Rules standardized by the consortium in 2001 (Ver.1) and 2002 (Ver.2) defines a set of information items about EJB-based components that should be published to (potential) users.

Users may search, compare, and choose easily the best component from market if standardized information on such components is available. Standardized information about the components is also helpful for users to develop a system using such components.

The Component Information Rules has already been used in Japan by both component vendors and component users in certain business operations. It has proved useful especially in using the XML form of component information. (The Component Information Rules Ver.2 provides the XML DTD.)

The consortium recently published a technical report which shows how to use RAS for representing component information based on the Component Information Rules.

1.2 How to use RAS to support the Component Information

There are two approaches to using RAS to support the Component Information; (1) defining a new RAS profile to express the information items defined by the Component Information Rules, and (2) packaging an XML file of the Component Information (as it is) into a RAS asset package.

The first approach enables RAS tools to support richer functions specific to the Component Information Rules than the second approach can do. The second approach, on the other hand, is much easier to implement and perhaps can be more generally used also for cases of other standards.

Although the second approach may also be useful, the following section explains the consortium's trial along the first approach, that is, an outline of a new RAS profile named Component Information Profile corresponding to the Component Information Rules of the consortium.

The Component Information Profile is also an example of extending RAS default profiles. The reader, however, should note that this is just one way to conduct a RAS profile extension and is not particularly recommended as the only way to do it.

1.3 Component Information Profile

This section shows the relationships among the Component Information Profile and other default profiles.

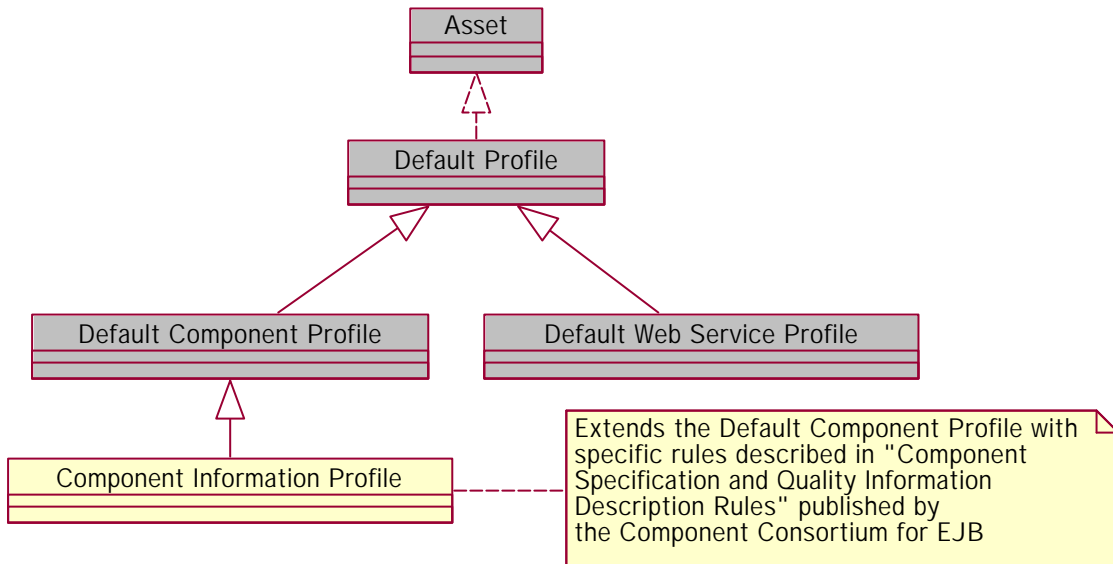


Fig. A-1 RAS Profile Relationships

Component Information Profile1.0 extends the Default Component Profile1.1 with specific rules described in “Component Information Rules 2.0” published by the Component Consortium for EJB.

1.4 Component Information Profile UML Model

In order to add information defined by Component Information Rules (e.g., performance information, and quality information, etc.) the Classification Section of Default Profile is considered to be the most appropriate section to be extended through addition of classes and their attributes.

In this document only a part of the definition of the extended profile is introduced. For more detail and the latest definition of the profile, see the consortium’s technical report: “Using Reusable Asset Specification (RAS) for Component Specification and Quality Information Description Rules” (<http://www.ejbcons.gr.jp/en/index.html>).

1.4.1 Top level structure

The added classes at the top level are as follows:

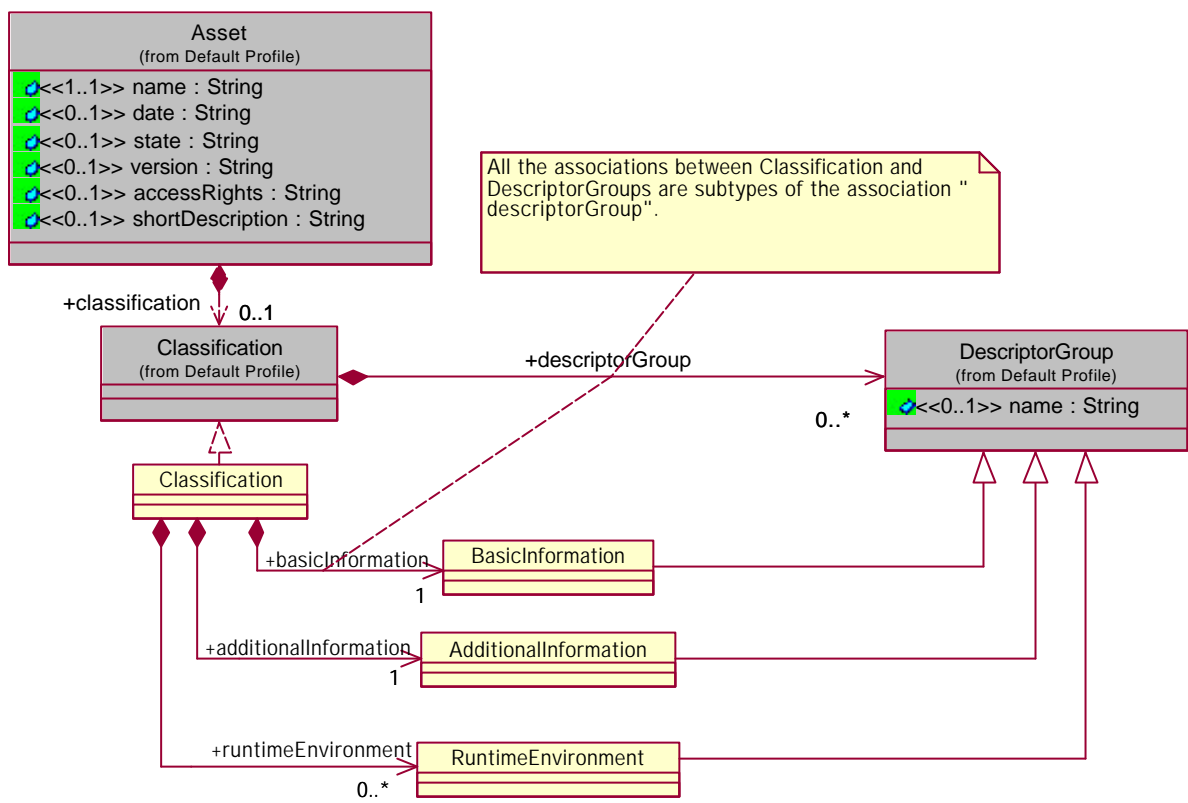


Fig. A-2 Top level structure of Component Information Profile

The following sections explain Basic Information, AdditionalInformation, and RuntimeEnvironment respectively.

1.4.2 BasicInformation

Basic information for the component. BasicInformation consists of several information items as shown below. Note that two typical basic information items, the name and the version number of the component, are described in the corresponding attributes defined in the class “asset” respectively rather than described in the extension part.

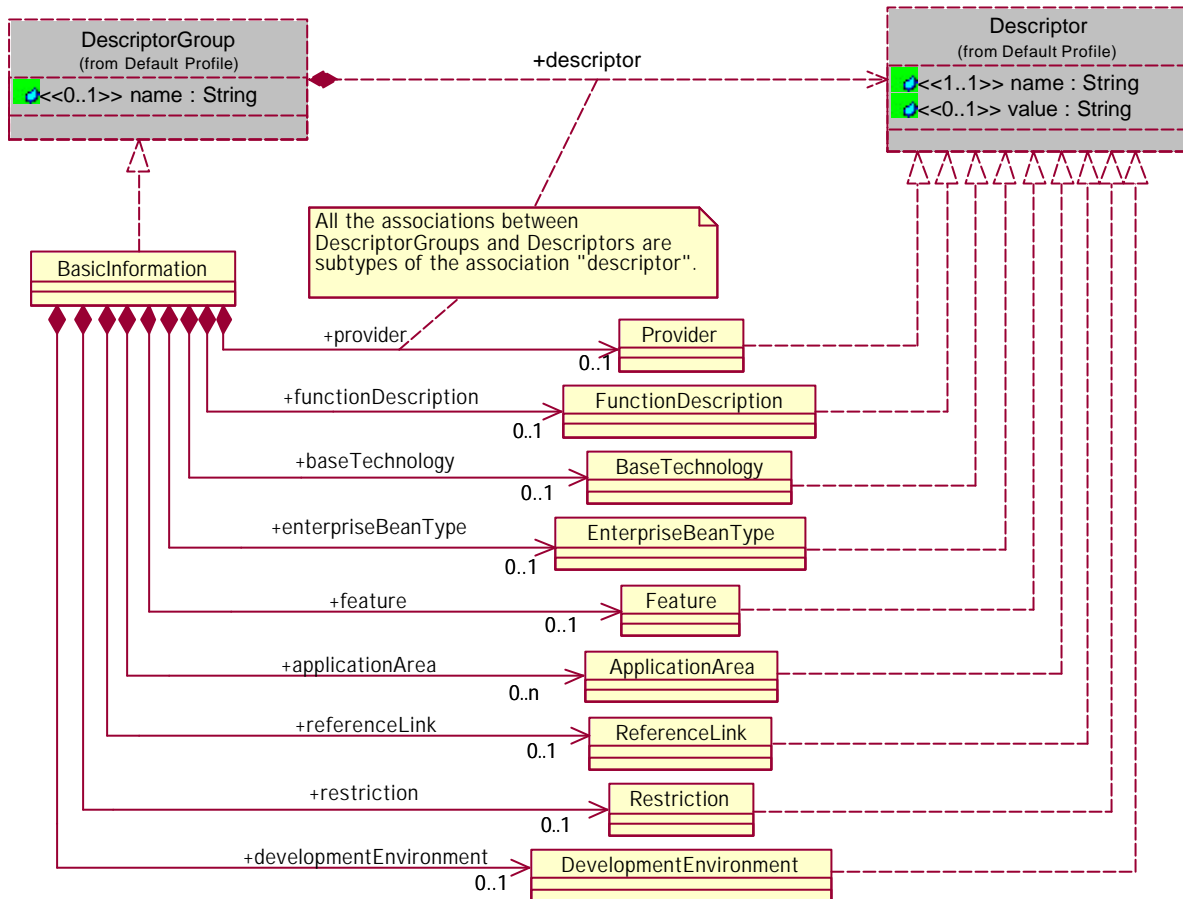


Fig.A-3 BasicInformation and its constituents

1.4.2.1 Provider

The provider name of the component, such as the name of the vendor company.

1.4.2.2 FunctionDescription

Description of the functionality of the component, by clarifying the functional scope and the relationships between this component and other related components. The UML package diagrams may be used.

1.4.2.3 BaseTechnology

Description regarding what kind of major technologies are employed in the component. Examples are EJB, CORBA, JDBC, JSP, Java Servlet, etc. and their versions.

1.4.2.4 EnterpriseBeanType

The type and the specification (including its version) of the primary enterprise bean contained in the component. The types are such as session bean (stateful or stateless), entity bean (BMP or CMP), and transaction type (BMT or

CMT), etc.

1.4.2.5 Feature

Features of the component, such as the differences and advantages against other components and/or their older versions.

1.4.2.6 ApplicationArea

Description regarding which domains the component can most often be used in. The domain can be a business area, work activity, system type, etc.

The explanation of the other information items of BasicInformation is omitted here.

1.4.3 AdditionalInformation

Additional information for the component, such as performance information and quality information of the component. AdditionalInformation consists of several information items as shown below.

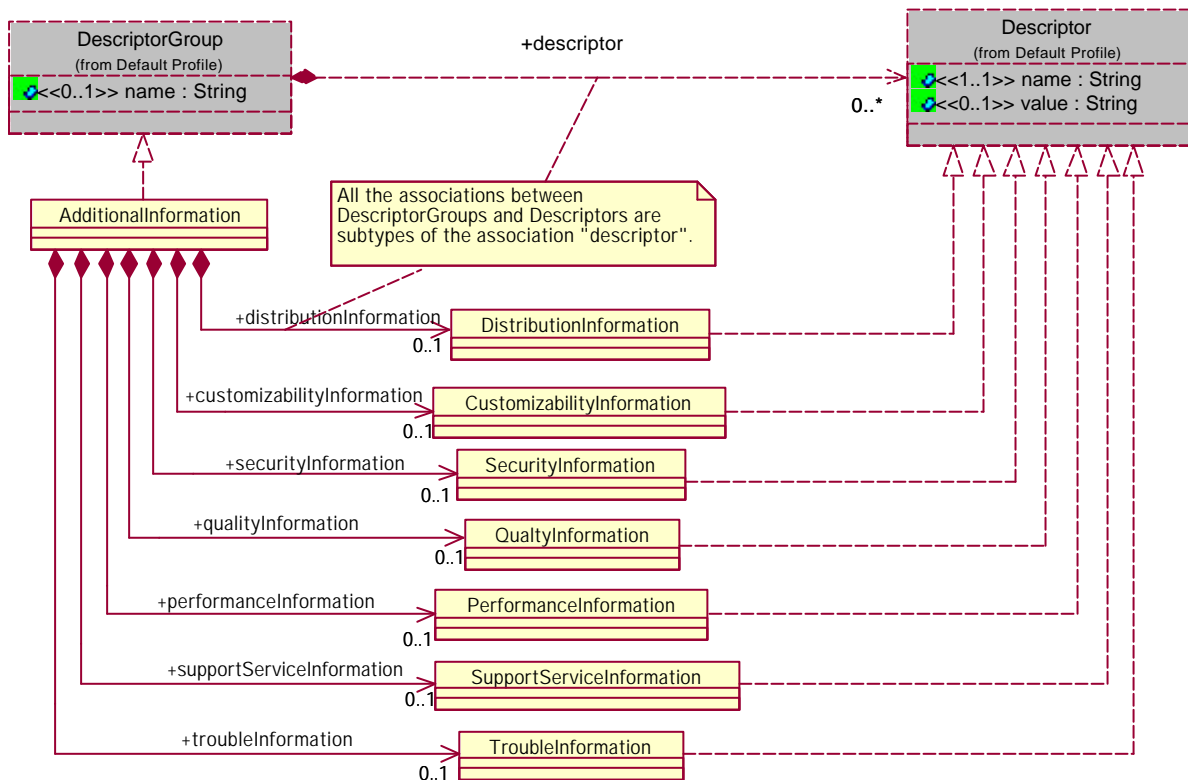


Fig.A-4 AdditionalInformation and its constituents

1.4.3.1 DistributionInformation

Description regarding how the component will be distributed, such as the price list, license types, itemized list of contents, and the means of media such as CD-ROM and/or download through a network.

1.4.3.2 CustomizabilityInformation

Description regarding what kind of customizability the component provides, such as how to modify the deployment

descriptors, how to change the source code, how to extend the base classes, etc.

1.4.3.3 SecurityInformation

Description of the component's security features, including the specification of the security features and their usage. Examples are security roles and the access privileges to the methods in the entry of the deployment descriptor.

1.4.3.4 QualityInformation

Description of the component's quality, such as the evaluation results, evaluator information, evaluation criteria, employed evaluation method, etc. If the description shows any quantitative results, then they should be accompanied by reasonable evidence data such as the number of test cases, the test coverage, quality growth curve, etc.

1.4.3.5 PerformanceInformation

Description of the component's execution performance. If the description shows any quantitative information, this should be accompanied by reasonable evidence data such as the specification of the evaluation methods (measuring environment, conditions (e.g., client multiplicities), how it was measured, etc.), and the results (response time, throughput, resource consumptions, etc.).

1.4.3.6 SupportServiceInformation

Description regarding what kind of support services are available for the component user, such as the helpdesk availability, Q&A services, customization services, support organizations, price list of services, conditions, etc.

1.4.3.7 TroubleInformation

Information regarding bugs known to the component, such as trouble identification number, the phenomena, reported date, relevant components, current situations, cause, and how to resolve the trouble.

1.4.4 RuntimeEnvironment

Description of the runtime environment of the component. RuntimeEnvironment consists of several information items as shown below.

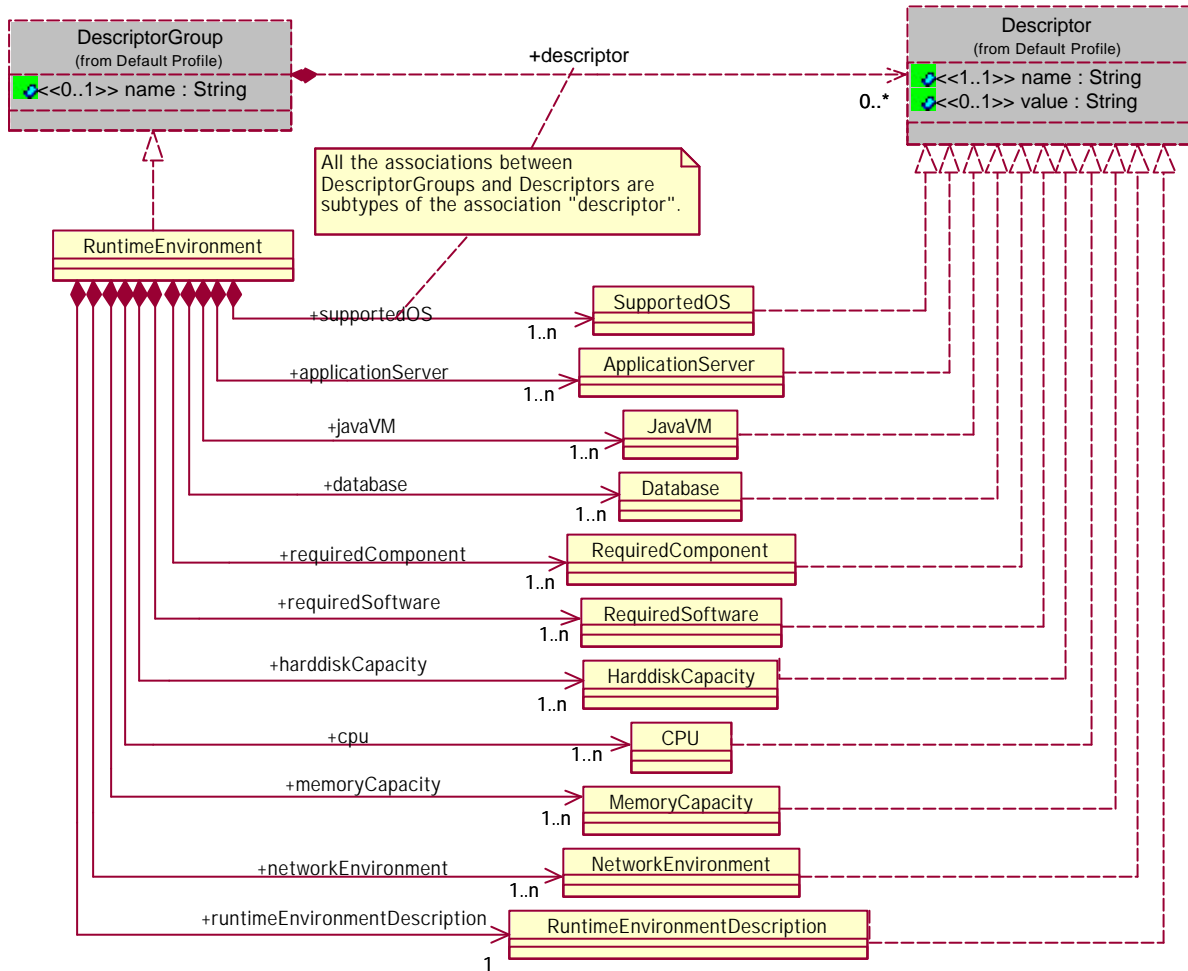


Fig.A-5 RuntimeEnvironment and its constituents

The rest of the profile's definition is omitted here. For more detail and the latest definition of the profile, see the consortium's technical report: "Using Reusable Asset Specification (RAS) for Component Specification and Quality Information Description Rules" (<http://www.ejbcons.gr.jp/en/index.html>).