Common Component Specification Proposal

Date	October 1, 2015
Spec Title	Service Manager
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Status	New
Version	1.1 (Revised)

Executive Summary

This document contains a proposal to the Common Component Standards (CCS) Steering Committee to form a new project team whose goal is to produce a specification for *Service Manager* which is a common infrastructure component used to start and manage all other Common Support Services. The following sections of the document describe in general terms what the component is, the benefits it provides to application developers, and what the team's deliverables would be.

Component Description

A service is a business function that is exposed to the client through the service interface or a common reusable business function used by the application itself. These include the Business Entity, Task and Workflow components. These services are typically defined as class based objects or procedures. In addition, a service could also be any functional component such as a logging service or messaging service.

A *Service Manager* component would be a member of the OERA common services group which will be instantiated as part of the start-up process of a session. The *Service Manager* is used to instantiate various objects or procedures and shut them down as appropriate based on a life cycle configuration for the service. The *Service Manager* is the central controller which ensures that services are initialized consistently and not left consuming resources unnecessarily or started multiple times. In addition, configuration settings are used by the service manager to locate the correct service to start.

For example, the *Service Manager* receives a request via the Service Interface, which through Discovery it determines a specific Business Entity is required, which is not currently instantiated. Therefore the *Service Manager* Instantiates the required Business Entity and its related components.

Major roles and responsibilities of a *Service Manager* are:

- Manages Common Infrastructure Services/Managers
- Responsible for the life-cycle of the Common Infrastructure manager processes
- Responsible for the life-cycle of Application Components
- Validates permission to access Application Components via Authorization Manager
- Responsible for Discovery of the appropriate Business Component for the service request

Benefits and Use Cases

Major benefits of using a *Service Manager* are listed below:

- *Service Manager* can help to start and manage all common support Services. Different application component types that can be created and managed using a *Service Manager* includes Business Entity, Task and Workflow components
- The *Service Manager* manages the life-cycle of Application components in the local session:
    - When an Application Component reference is requested and it does not exist, the Application Component will be created (optionally as a singleton).
    - A reference to an Application Component will be returned on request using a logical name (possibly also using a component type).
    - Application Component life-cycle management will optionally be done using some form of memory management to keep memory utilization within certain bounds
- The *Service Manager* helps for shutting down Common Support Services within the local session on request. This includes deleting all running objects and session cleanup work (releasing resources also called as garbage collection). Resources held by individual objects are released by the objects themselves when they are deleted (destructor type construction).

Related / Dependent Common Component Specifications

The *Service Manager* could work in conjunction with the configuration manager and session manager. In addition, the *Service Manager* component specification may be incorporated into any other common component standard specification. This component will be accessed by Service Interface component as well as by all business components (Business Workflow, Business Tasks and Business Entities).

Project Team Requirements

A *Service Manager* team has not yet been formed. The team's formation will commence upon acceptance of this standards specification proposal by the CCS Steering Committee. The composition of the team will be supplied to the CCS Steering Committee within 30 calendar days after acceptance.

The *Service Manager* team will provide regular updates whereby the CCS Steering Committee may gauge their progress, offer guidance, or require additional information.

The team's goal would be to produce a draft *Service Manager* Component specification within a period of 90 days after the team's formation was complete. Upon initial acceptance by the CCS Steering Committee for meeting specification requirements, the specification would be published to the CCS community for comments for a period of 90 days. During the 90 day community comments period the team is responsible for answering all comments and requests for clarification. At the completion of the 90 day comments period a second version of the *Service Manager* specification will be produced that incorporates those public comments accepted by the team. The second version of the *Service Manager* specification will then be ready for a formal review by the CCS Steering Committee for acceptance, cancelation, postponement, or denial.

An essential part of the project team's delivery is that of an operating reference sample that may assist is the community's in gaining a better viewpoint of how a *Service Manager* component may be used, rather than just reading a specification. This sample would also serve as a physical illustration of the originating team's initial vision of the standard.

Upon acceptance of the *Service Manager* Team will have one last task, and that is to publicly publish the standard, sample, and any other artifacts generated as part of the project.

The team would remain until one of those three outcomes is reached: acceptance, cancelation or postponement. If the CCS Steering Committee postpones the project the team will be disbanded and should the project be resumed at a later date a new team would be formed.