EPIC ClearView Synchronization Service Software Description

APPROVALS:

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REVISION HISTORY

Revision	Revision Date	Reason for Revision/Change Request	Revised By
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EPIC ClearView Synchronization Service
Software Description

1.0 Purpose

This document provides a description of the ClearView Synchronization Service which used to communicate and synchronize between the ClearView application and EPIC Central.

2.0 Scope

This document describes at a high level the ClearView Synchronizer Service. The specific requirements and specifications for the ClearView Shell software are captured in the specific requirements and specifications located in the DHF and/or controlled through EPIC's quality system.

3.0 Definitions

EPIC Central	A Software as a Solution (SaaS) website that provides control services for the ClearView application. These services are provided through a web service interface.
Web Service	A function available to other applications over the internet. The function may require credentials in order to access the functionality.
https://	A secure (encrypted) protocol for communication between a web service and its consumer.
Windows Service	A type of application that runs on the Microsoft windows operating system that does not rely on a user to launch it. A service is started when the operating system starts and runs independent of any users being logged into the system.

4.0 Operational Environment

The ClearView Shell is software that runs on the Windows XP/Windows 7 environment.

5.0 Functional Description

The primary function of the ClearView Synchronization Server (CSS) is to manage the communications between the ClearView application and EPIC Central. A persistent connection to the internet is required for the ClearView system to operate in normal mode. The CSS will use this connection to perform various housekeeping and authentication tasks between the ClearView application and EPIC Central. The areas

noted below are the core functions of the CSS, each of these are described in greater detail in the Requirements and Specifications documents.

5.1 The service will serve as a communication mechanism that has the capability to queue the communications when the EPIC Central system is not available. The communications can be done either in real-time (status updates, etc.) or queued. The service will continuously work to synchronize the information necessary between ClearView and EPIC Central.

5.2 The service will keep track of the amount of time that access to EPIC Central is available and will communicate to the application when too much time has transpired without EPIC Central communication.

6.0 Development Environment

This section describes the development environment used to develop and support the ClearView Synchronization Service.

6.1 Programming Languages and Tools

The ClearView Synchronization Service has been developed using Microsoft .NET Framework Version 4 in a Microsoft Visual Studio 2010 Development Environment. The application has been written in managed code, C# being the language of choice.

6.2 Environment

The development environment consists of various development systems dedicated to specific functions. These systems are dedicated to user interface development, reporting development, computational development, and testing.

6.3 Configuration Management and Version Control

Configuration management and version control is handled through Perforce, a SCCS (Source Code Control System), which is specified in EPIC's Software

Development procedure, EG-010. Software development lifecycle is specified in EPIC's Software Development Lifecycle procedure, EG-018.

6.4 Documentation

All software documentation is contained in several sources including:

6.4.1 Software Requirements Documents

The entire product life cycle is contained in the software requirements specification (SRS) documents and summarized into an Input/Output Matrix table. The software requirements specifications (denoted as SR-XXX in the Design History File) contain all of the software requirements for the ClearView Shell software.

6.4.2 Detailed Software Design Specifications

Detailed software design specifications were developed to document the implemented functions of the software in response to the requirements documents. The detailed specifications (denoted as SS-XXX in the Design History File) provide specific detail regarding the functionality available to users of the ClearView Shell software. The specifications serve as a basic for testing design and include screen shots of the implemented functionality as available to users.

6.4.3 In Code Documentation

All major methods and classes are documented with a description of the purpose for the method or class as well as a description of the parameters required by the object.

7.0 References

Site Creation, IT-001
Software Development, EG-010
Software Development Lifecycle, EG-018