

Joint Effects Model (JEM) Increment 2

Technical Data Package (TDP) Table of Contents

REV. 1.1

July 3, 2012

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1. CCMI Auto generated Test Tool (CATT) 1.3.0 Installer

A. CATT 1.3.0 Installer

This is the latest version of the CCMI Auto Generated Test Tool (CATT) installer. CATT is a tool intended for use by model developers, integrators, and analysts. CATT allows users to test models in isolation or as part of an assemblage of models. There is a set of CCMI models within CATT that have varying levels of compliance with the CCMI Guidance document. The CCMI models can be extracted from CATT and run within the JEM Plug-n-Play User Interface (JP2UI) / JEM Plug-n-Play CCMI Web Services Interface (JP2CWSI) framework. Many of the bugs or missing features are identified in the CCMI PCR Database.

B. Installation Instructions

This document describes how to install, configure, and run CATT.

2. CATT 1.3.0 source code

A. Source code and documentation

This includes the source code for all CCMI developed components and associated documentation. The table below identifies the location within the source where specific items can be found.

CATT 1.3.0 Source Code Contents

Part	Description	Location & Source Root
CATT Installer Creation Guide	The Installer describes how to build the CATT installer using the CATT 1.3.0 packaged CCMI components.	Documentation\Installer\CATTInstallerCreation.docx
CCMI Framework source code	The CCMI framework code includes multiple Eclipse IDE source code projects of OSGi bundles. The CCMI Framework implements capability are used by the CATT application components, CCMI components, and JP2UI/JP2CWSI components.	"framework*" folders with the exception of "framework\ccmi-blueprint*" folders
CCMI Blueprints source code	The CCMI Blueprint code includes multiple Eclipse IDE source code projects of OSGi bundles. The CCMI Blueprints include Java interfaces, CCMI Blueprint XSD schemas, JAXB generated source code, and Java source code.	"framework\ccmi-blueprint*" folder
CATT User Interface source code	The CATT User Interface code includes multiple Eclipse IDE source code projects of OSGi bundles.	resides within the "catt" folder
CCMI Components' source code	Each CCMI components' code includes a minimum of one Eclipse IDE source code project OSGi bundle. Other Eclipse IDE OSGi support bundles and Component wiring OSGi bundles may be included in the same parent folder.	reside within a blueprint identifier subfolder
JP2UI source code	JEM Increment 2 Plug and Play User Interface demonstration packaged as multiple Eclipse IDE projects. These components demonstrate a "possible" architecture for JEM increment 2 User Interface for CCMI components.	reside within "jp2ui" folder

JP2CWSI source code	JEM increment 2 Plug and Play CCMI Web Services Interface packaged as multiple Eclipse IDE projects. These components demonstrate a scalable architecture for deploying CCMI components to support multiple users as a Web Application. It also demonstrates the use of Distributed OSGI (D-OSGi) technology.	reside within the "jp2cwsii" folder
JP2UI/JP2CWSI design description	The JEM Plug-and-Play CCMI Web Services Interface (JP2CWSI) and User Interface (JP2UI) Software Design Description.	Documentation\JP2UI-JP2CWSI\JP2UI and JP2CWSI Software Design Description Issue 3.docx
JP2UI/JP2CWSI test description	The JEM Plug-and-Play CCMI Web Services Interface (JP2CWSI) Software Test Description. Instructs on how test/demonstrate JP2UI/JP2CWSI within the Eclipse IDE and as an installed application.	Documentation\JP2UI-JP2CWSI\JP2UI and JP2CWSI Software Test Description Issue 3.docx
CCMI Performance Analysis	This document considered the performance cost in transitioning from tightly coupled software to an architecture based on decoupled components, communicating either via direct data exchange or via XML. The aim is to provide guidance regarding how components should be designed in order to achieve CCMI compliance and efficient execution.	Documentation\White Papers\CCMI Performance Investigation Issue 1.docx
CCMI ISM Integration white paper	This document provides an overview and lessons learned from the integration of select HPAC MBU ISMs into the CCMI framework. It covers ISM Integration and CATT Testing, JP2CWSI Wiring, and JP2UI user-focused UI Development.	Documentation\White Papers\TO006 White Paper Issue 1.docx

B. CATT 1.3.0 SVD

This is the CATT Software Version Description document.

C. CATT Version 1.3.0 Contents

A multi-sheet Excel workbook that provides a high level view of the CCMI components contained within CATT 1.3.0. More specifically it includes:

- i. A mapping for a subset of JEM Increment 2 System Allocated Baseline PWS software requirements to existing CCMI components that may be useful.
- ii. A list of available CCMI components, their location, related components and testing information.
- iii. A list of Support CCMI OSGi bundles that are used by the primary CCMI components.
- iv. A list of Mock CCMI components that were developed to aid in the testing of other CCMI components.

3. Common CBRN Model Interface (CCMI) Documentation

A. CCMI Guidance Documentation

- i. ReadMe**
This is a brief informational document on the compressed archive.
- ii. V&V Report Template**
This is the template describing information that is expected in a CCMI component V&V report.
- iii. CCMI Software Version Description (SVD)**
This is the SVD template for a CCMI component.
- iv. Compliance Checklist**
This is a checklist of CCMI requirements that delivered components must satisfy.
- v. Guidance Document**
This is the primary CCMI document that describes the concepts and requirements for creating a component that is CCMI compliant. There are three forms provided; a PDF document, a MS Word document, and a MS Word document with the track changes feature used to show all modifications from prior version (C002).
- vi. Eclipse Versioning**
This website/documentation describes how CCMI components are versioned.

4. CCMI PCR Database

This Microsoft Excel document is a snapshot of the Problem Change Requests related to CCMI Auto generated Test Tool (CATT), CCMI models, CCMI framework, and other software related to CCMI.

5. HPAC 125 Source Code

The HPAC 125 source code is not directly available on Project Forge. However, a software request form is provided. The HPAC 125 model source code is integrated into J2RRP 1.0.1 and is the code origin for some of the provided CCMI components.

6. J2RRP 1.0.1 SDK

JEM 2 Risk Reduction Prototype (J2RRP) has a subset of Hazard Prediction Assessment Capability (HPAC) MB 125 models integrated into it. This is the source code for J2RRP.

7. JEM 1.0 Installer

This file installs the JEM Increment 1 (ArcIMS 10) software on a Windows-based machine. Many of the models that have been integrated into JEM originated from an older version of Hazard Prediction Assessment Capability (HPAC).

8. JEM 1.0 Source Code

This compressed archive is the source code for JEM Increment 1.

9. JEM Increment 1 Documentation

A. JEM APIRM

This document is used as a reference to guide developers who need to programmatically access JEM services. This document will cover the organization of the JEM files that are required for development, coding standards, best practices, naming conventions, and client code examples to access the JEM Modeling web service and the JEM Weather web service.

B. JEM SAM

This document describes the installation and configuration of JEM Increment 1.

C. JEM SPG

This document describes how to use the JEM SDK, setup the JEM development environment, build JEM, and facilitate development and integration of models.

D. JEM SUM

This document provides instructions for new users on how to use the JEM application, and technical reference information for experienced users. The section titled Getting Started with JEM (see Section 3) is a thorough overview of basic JEM procedures intended for both new and experienced users.

E. JEM SVD

This document describes the changes made to current version of the JEM Increment 1 software delivery.

F. JEM Increment 1 PSPEC

This Performance Specification document (PSPEC) defines Performance Specification requirements (PSs) for the Joint Effects Model (JEM) Increment 1.

G. Capability Production Document (CPD)

This Capability Production Document (CPD) follows and builds upon the capabilities of the Joint Effects Model (JEM) Operational Requirements Document (ORD) that was approved by the Joint Requirements Oversight Council on 2 August 2004. This purpose of this CPD was first to support a Milestone (MS) C Decision Review and second, to update the JEM ORD to a CPD, consistent with the Chairman, Joint Chiefs of Staff Instruction (CJCSI) 3170.01E, 11 May 2005 and the Chairman, Joint Chiefs of Staff Memorandum (CJCSM) 3170.01B, 11 May 2005.

H. GCCS Non-COE Developer Integration Guide (GNCDIG)

This Global Command and Control System (GCCS) – Joint (GCCS-J) Non-Common Operating Environment (COE) Developer Integration Guide (GNCDIG) documents the GCCS-J Chief Engineer's guidance to developers and integrators of software components and mission applications. This document provides technical, security, documentation, and compliance requirements to each developer delivering software for use by the GCCS-J community.

10. JEM Increment 2 Documentation

A. Performance Work Statement

The Performance Work Statement (PWS) describes the Contractor's work in terms of required results for the procurement of software development, integration, and on-going software upgrade services, including software maintenance and production updates to support the Joint Effects Model (JEM) Increment 2 (Incr 2) program of record.

B. StdV-1 Technical Standards

The StdV-1 defines the technical, operational, and business standards, guidance, and policy applicable to the architecture being described. As well as identifying applicable technical standards, the DoDAF V2.0 StdV-1 documents the policies and standards that apply to the operational or business context.

C. Draft JEM Increment 2 System Performance Specification

This document is a snapshot from the JPM IS Requirements Management tool, Jama Contour. It captures the draft JEM Increment 2 system-level requirements that have been derived from the Future Capabilities Document.

11. JP2UI JP2CWSI Installer Version 1.x

A. Runtime Installer

This software package is an installable JEM Plug-n-Play User Interface and JEM Plug-n-Play CCMI Web Services Interface. The JP2UI / JP2CWSI application is a reference implementation of a JEM Increment 2 application. The focus for JP2UI is demonstrating that an end-user web user interface can be developed for the CCMI models. The highlights of the user interface include functionality to: display all the inputs for a single wiring without overlap, display different user level (warfighter and analyst) user interfaces, and translate the inputs and distribute the information to the different CCMI models. The focus for JP2CWSI is demonstrating that an environment for which multithreaded models can run with single threaded models.

12. HPAC 125 Installer

The HPAC 125 Installer is not directly available on Project Forge. However, a software request form is provided. This application installs the Defense Threat Reduction Agency's Science and Technology software, Hazard Prediction and Assessment Capability (HPAC). Many of the models that have been integrated into JEM originated from HPAC.

13. JEM RRP 1.0.1 Installer

The JEM RRP 1.0.1 Installer is not directly available on Project Forge. However, a software request form is provided. This application installs the JEM Risk Reduction Prototype. Many of the models that were in JEM Increment 1 have been updated with the models from HPAC 125.

14. JEM RRP 1.0.1 Historical Weather data

The JEM RRP 1.0.1 Historical Weather data is not directly available on Project Forge. However, a software request form is provided. The historical weather data is packaged with the JEM RRP software.

15. HPAC MBU 168 Source Code

The HPAC MBU 168 Source Code is not directly available on Project Forge. However, a software request form is provided. The HPAC MBU 168 source code contains some of the functional referent capability as identified in the PWS.

16. HPAC MBU 168 Installer

The HPAC MBU 168 Installer is not directly available on Project Forge. However, a software request form is provided. The HPAC MBU 168 application can be used to validate the proper integration of CCMI components where it provides the functional referent capability.

17. VLS Drive

The contents includes source code for a subset of VLS Track capability including VLS Incident Source Model (vlssource.for), Secondary Evaporation (vlssevap.for), and Transport and Diffusion (vlsmove.for) as well as a test driver executable (vlsdrive.exe) and source code (vlsdirve.for). A set of test data is also provided. The VLS Drive tool can be used to validate the proper integration of CCMI components where it provides the functional referent capability.

18. CATT 1.3.0 Tutorials

The CCMI training includes documentation, videos, and sample code that instructs CCMI component developers on the basics of getting started with CCMI component development.

19. GEDIS 2.4.10 and UDM 2.22.1.0 Source Code

This includes the Geographic and Environmental Database Information System (GEDIS) version 2.4.1.0 and Urban Dispersion Model (UDM) version 2.22.1.0. This is the source code for Java jar files and native code DLL files that are used by multiple CCMI components.

20. Standard Operating Procedures

This is a set of documents that details all the steps and activities of a procedure or process, such as delivering software or documenting issues.