CENTRE ™ (Common Enterprise Resource)

Systems and Software Engineering Platform designed for CMMI compliance

Capability Maturity Model Integration (CMMI) is a process improvement approach that provides organizations with the essential elements of effective processes. **CMMI** helps integrate traditionally separate organizational functions, set process improvement goals and priorities, provide guidance for quality processes, and provide a point of reference for appraising current processes. (Software Engineering Institute, **SEI** web-site, www.sei.cmu.edu/cmmi/general/)

CENTRE is a software product designed, authored and produced by **Integration Technologies Group Inc. CENTRE** is composed of configurable modules intended to provide compliance with **CMMI** process areas and **ISO** clauses while increasing organizational efficiency, effectiveness and continual improvement.

Integration Technologies Group Inc. (ITG), www.itgonline.com, is a systems and software engineering company founded in 1984 and headquartered in Falls Church, Virginia, USA. ITG is ISO 20000-1:2005, ISO 9001:2008 and ISO 27001:2005 registered. As well, the company is an SEI member and partner and has been externally appraised twice at CMMI Level 3.

This document contains brief descriptions of **CENTRE CMMI** Software features which cover specific and generic evidence of compliance for practices required by **CMMI for Development Version 1.2** process areas. As with all process improvement methodologies and industry best practices, management commitment, quality record collection, analysis and processing are required to achieve improvement objectives and successful appraisals and registrations.

CENTRE was developed to facilitate today's Best Practices Certifications and process improvement methodologies. By using **CENTRE**, businesses can increase efficiencies across key business processes and satisfy many of the requirements stipulated by the **SEI** and international standards boards. Some of the benefits that may be derived by implementing compliance with **CMMI** process areas are:

- Improved Quality of Output
- Increased Accuracy of Estimates
- Earlier Identification of Defects
- Accurate Measurements of Processes
- Higher Operational Efficiency
- Cost Reduction and Integration with Industry Standards

As a result, an organization using **CENTRE** will be recognized as delivering successful service to its clients and constituents with dependably high-quality and consistent methods and practices. The **CENTRE CMMI** Software 1.2 implementation includes 'CENTRE ISO 9001:2008' Quality Management System elements which are:

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CENTRE - Document Control System (DCS)
CENTRE - Records Control System (RCS)
CENTRE - Human Resources
CENTRE - Meeting Management
CENTRE - Customer Satisfaction Surveys
CENTRE - Supply Chain Management
CENTRE - Ad-Hoc Report Writer

These elements are described in more detail in the **CENTRE ISO 9001:2008** Compliance Package - White Paper.

Disclaimer

Use of CENTRE modules or similar software alone does not result in organizational CMMI conformance. Documented procedures, defined processes and work instructions, staff training and internal audits of Process Areas compliance are needed to prepare an organization for a CMMI appraisal. The ITG CENTRE Document Control System (DCS) contains documentation that describes the ITG Quality Management System and consists principally of the following documents:

- Business Quality Manual (BQM) in conformance with ISO 9001:2008,
- Information Technology Services Management manual (ITSM) in conformance with ISO 20000-1:2005,
- Information Security Management System manual (ISMS) in conformance with ISO 27001:2005,
- Corporate process workflow, Quality Procedures and Quality Work Instructions.

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CENTRE CMMI Specific & Generic Evidence Elements:

CENTRE – Product Integration

SP 1.1 *Determine the product component integration sequence.*

CENTRE Evidence: The Product Integration sequence direct evidence, in the context of services and software development projects, are contained in the Deployment-Integration segment of the Requirements records, in the sequence segment of Release Management and in the Task Management of Projects.

Requirement

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Project/Tasks Integration & Sequence Records

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SP 1.2 *Establish and maintain the environment needed to support the integration of the product components.*

CENTRE Evidence: The Integration environment for Projects, Changes, Requirements and Releases are the **CENTRE** corresponding modules.

SP 1.3 *Establish and maintain procedures and criteria for integration of the product components.*

CENTRE Evidence: The direct evidence for compliance with this Specific Practice is contained in the CENTRE Document & Records Control module.

DOCUMENT#	TITLE	AUTHOR	DCS SUBMISSION DATE	DB INFO REVISED	
973-V2	Integration Technologies Group Password Policy - Network Administration	Sung Yoon	7/18/2008 5:52:28 PM	10/23/2008 10:16:57 AM	View
859-V1	Product Integration Course Material- Internal Training	Emmanuel Coutoulakis	8/13/2007 5:30:23 PM	8/13/2007 5:30:23 PM	View
858-V1	Product Integration Course Outline - Internal Training	Emmanuel Coutoulakis	8/13/2007 5:26:14 PM	8/13/2007 5:26:14 PM	View
861-V1	Product Integration Presentation- Internal Training	Emmanuel Coutoulakis	8/13/2007 5:35:01 PM	8/13/2007 5:35:01 PM	View
860-V1	Product Integration Reconciliation Matrix - Internal Training	Emmanuel Coutoulakis	8/13/2007 5:32:45 PM	8/13/2007 5:32:45 PM	View

SP 2.1 *Review interface descriptions for coverage and completeness.*

CENTRE Evidence: The direct evidence for compliance with this Specific Practice is contained in the Verification and Peer Review segments of the Requirements module.

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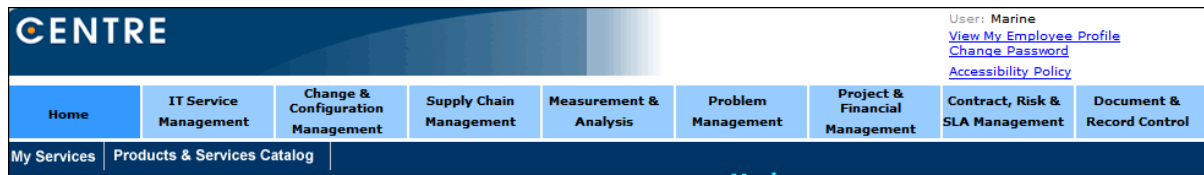Author: Michael P. Angelakis   DCS #1037   Version: 3.0   Date: 04/13/10   Page 5 of 10

SP 2.2 *Manage internal and external interface definitions, designs, and changes for products and product components.*

CENTRE Evidence: The definitions, changes and designs direct evidence for compliance with this Specific Practices are contained in the Change and Requirements module records.

Change Request Record

Change Analysis Record

Requirement Description Record

SP 3.1 *Confirm, prior to assembly, that each product component required to assemble the product has been properly identified, functions according to its description, and that the product component interfaces comply with the interface descriptions.*

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CENTRE Evidence: The Verification process and related records may be used as direct evidence for compliance with this Specific Practice.

Verification 'Test Cases' Documents

DOCUMENT#	TITLE	AUTHOR	DCS SUBMISSION DATE	DB INFO REVISED
622-V1	CENTRE Ad-Hoc Reports Module Verification Test Cases - Software Engineering	John Cambiotis	10/18/2005 2:32:00 PM	10/29/2008 1:47:52 PM
815-V1	CENTRE Change Request Module Verification Test Cases - Software Engineering	Elias Agritellis	6/27/2007 9:27:50 AM	10/29/2008 9:52:14 AM
604-V1	CENTRE Inventory Module Verification Test Cases - Software Engineering	John Cambiotis	9/8/2005 4:49:00 PM	10/29/2008 1:48:33 PM
605-V1	CENTRE Part Orders Module Verification Test Cases - Software Engineering	John Cambiotis	9/8/2005 4:52:00 PM	10/29/2008 1:51:38 PM
607-V1	CENTRE Purchasing Module Verification Test Cases - Software Engineering	John Cambiotis	9/9/2005 1:26:00 PM	10/29/2008 1:53:12 PM
678-V1	CENTRE Record Locking Scheme Verification Test Cases - Software Engineering	Emmanuel Coutoulakis	3/23/2006 5:30:00 PM	10/29/2008 10:04:35 AM
608-V2	CENTRE Sales Order Module Verification Test Cases - Software Engineering	John Cambiotis	9/9/2005 1:31:00 PM	10/29/2008 1:54:20 PM
609-V1	CENTRE Service Calls Module Verification Test Cases - Software Engineering	John Cambiotis	9/12/2005 4:54:00 PM	10/29/2008 1:55:04 PM
606-V1	CENTRE SLA Exceptions Feature Verification Test Cases - Software Engineering	John Cambiotis	9/9/2005 1:22:00 PM	10/29/2008 1:56:02 PM
603-V2	CENTRE System wide Verification Test Cases - Software Engineering	John Cambiotis	9/8/2005 3:34:00 PM	10/29/2008 1:56:36 PM

SP 3.2 *Assemble product components according to the product integration sequence and available procedures.*

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CENTRE Evidence: The direct evidence supporting compliance with this specific Practice is contained in Project and Release Management records.

SP 3.3 *Evaluate assembled product components for interface compatibility.*

CENTRE Evidence: The direct evidence supporting compliance with this specific Practice is contained in Project, Documents & Records Control and Release Management records as system-wide verification.

DOCUMENT#	TITLE	AUTHOR	DCS SUBMISSION DATE	DB INFO REVISED
603-V2	CENTRE System wide Verification Test Cases - Software Engineering	John Cambiotis	9/8/2005 3:34:00 PM	10/29/2008 1:56:36 PM

SP 3.4 *Package the assembled product or product component and deliver it to the appropriate customer.*

CENTRE Evidence: The direct evidence supporting compliance with this specific Practice is contained in Project, Documents & Records Control and Release Management records as system-wide verification.

In Release Management, the completed requirements are designated as "Closed," as they have been verified and delivered to the customer:

| | | | | | | | | | Software Requirements Score Card per Release | | | | | |

Line Item	Program	Release	Status	Total Requirements	Total Estimated Hours	Total Actual Hours	% Variance	Absolute % Variance	Total Defects Pre-Release Chart	Total Defects Post-Release Chart	Total Defect Requirements with High Impact Or High Severity	Percent Defect Requirements with High Impact Or High Severity	Total Defect Requirements with Medium/Low Impact Or Medium/Low Severity
0	PCS	PCS 1.1	Pending	1	63.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	Government Response	GRI 2.0	Pending	2	4.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ITG CENTRE	4.6.9	Pending	19	172.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ITG CENTRE	4.6.8	Open	35	1178.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ITG CENTRE	4.6.7	Closed	31	775.68	825.75	-6.46	29.65	16	8	1	3.23	0
5	ITG CENTRE	4.6.6	Closed	33	1330.68	1196	10.12	14.06	36	5	1	3.03	1
6	DCMA Migration Technical Solution	1.0	Closed	1	218	375.5	-72.25	72.25	1	0	0	0	0
7	DCS	DCS 1.0	Closed	2	55.25	56	-1.36	2.56	1	0	0	0	0
8	ITG CENTRE	4.6.5	Closed	53	1010.16	920.25	8.9	14.64	24	6	2	3.77	9

In Projects as "Completed" as they have been verified and delivered to the customer:

| | | MANAGE PROJECTS | | | | | | | | | | | |

SHOW [Completed ▼] PROJECTS [Refresh]

Project Name		Contract Number	Status	Priority	Plan Start Date	Actual Start Date	Planned End Date	Actual End Date	POC	DAR	View Project Summary	View Tasks	View Hours	View Gantt
8026-001 Depot Billing	Search Survey	8026-001	Complete	1	6/9/2006 8:00:00 AM	6/9/2006 8:00:00 AM	6/9/2008 5:00:00 PM	6/10/2006 8:00:00 AM	Jason Dudley	NO	SUMMARY	TASKS		
8026-003 Depot Billing	Search Survey	8026-003	Complete	1	6/9/2006 8:00:00 AM	6/9/2006 8:00:00 AM	6/9/2008 5:00:00 PM	12/31/2006 8:00:00 AM	Jason Dudley	NO	SUMMARY	TASKS		
8026-006 Depot Billing	Search Survey	8026-006	Complete	1	6/8/2006 8:00:00 AM	6/8/2006 8:00:00 AM	6/9/2008 5:00:00 PM	12/31/2006	Jason Dudley	NO	SUMMARY	TASKS		

CENTRE CMMI 1.2 Artifacts for Process Improvement

In Document & Records Control as instructional material related to a delivered product:

DOCUMENT#	TITLE	AUTHOR	DCS SUBMISSION DATE	DB INFO REVISED
918-V1	Causal Analysis and Resolution Course Material - Internal Training	Emmanuel Coutoulakis	11/26/2007 1:30:34 PM	10/29/2008 10:01:39 AM

DAR Record