

CENTRE CMMI 1.2 Artifacts for Process Improvement

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:

CENTRE - Document Control System (DCS)

CENTRE CMMI Version 1.2 Compliance Configuration Management - White Paper

Author: Michael P. Angelakis DCS #995 Version: 4.0 Date: 04/13/10 Page 1 of 6

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CENTRE CMMI 1.2 Artifacts for Process Improvement

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.

CENTRE CMMI 1.2 Artifacts for Process Improvement

CENTRE CMMI Specific & Generic Evidence Elements:

CENTRE Configuration Management

SP 1.1 *Identify the configuration items, components, and related work products that will be placed under configuration management.*

CENTRE Evidence: The Configuration and Contract Management modules provide direct evidence for compliance with this and the rest of Specific Practices in this Process Area. CI identification takes place in the CI Management subsystem of the Contract Management module.

Contract CIs

Contract #	Serial #	Manufacturer	Model	Description
5263-000	BT00000052837	INTEL	LA440GX+ DP	ITG-WASQL-FSO
5263-000	ECHK4490327	INTEL	SE7501CW2	ITG_CENTRAL
5263-000	072500348200810	ITG		ITG-IDS
5263-000	ECHK4490481	INTEL	SE7501CW2	ITG-CENTRE01
5263-000	ECR14380988	INTEL		ITG-DELTEK

Configuration Item

CI Configuration

Configuration:
 Hostname: ITG_CENTRAL - MAC: 00-04-23-AE-8D-EA
 IP: 192.168.4.131 - OS: Server 2003 Service Pack 2
 Processor: Xeon 2.66 GHz - RAM: 3.75 GB

CI Summary

Serial Number [ECHK4490327] SUMMARY														
<table border="1"> <thead> <tr> <th>First Service Record</th> <th>Service Records</th> <th>Total Parts Shipped</th> <th>Total Parts Cost</th> <th>Total Electronic Repair Labor Charges</th> <th>Total Subcontractor Labor Charges</th> <th>Last Service Record Date</th> </tr> </thead> <tbody> <tr> <td>8:57:39 AM</td> <td>0</td> <td></td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>11/3/2008 8:57:39 AM</td> </tr> </tbody> </table>	First Service Record	Service Records	Total Parts Shipped	Total Parts Cost	Total Electronic Repair Labor Charges	Total Subcontractor Labor Charges	Last Service Record Date	8:57:39 AM	0		0.00	0.00	0.00	11/3/2008 8:57:39 AM
First Service Record	Service Records	Total Parts Shipped	Total Parts Cost	Total Electronic Repair Labor Charges	Total Subcontractor Labor Charges	Last Service Record Date								
8:57:39 AM	0		0.00	0.00	0.00	11/3/2008 8:57:39 AM								

CI Relationships

CONFIGURATION ITEM RELATIONSHIPS											
Serial Number: ECHK4490327		Model: SE7501CW2		Urgency: 5		Impact: 5					
Manufacturer: INTEL		City:		State:		Zip:					
Configuration Item: Server		Type: ITG_CENTRAL		Description: ITG_CENTRAL		Zip:					
Relationship Type	Serial Number	Manufacturer	Configuration Item Type	Model	City	State	Zip Code	Urgency	Impact	Add/Remove	
LICENSE TO	P7200264	Windows	Svr Ent 2003 Win32 English OLP NL		Falls Church	Va	22043	1	1		
CHILD TO	CHK0847V1FQ	CISCO	Networking Devices	C3550-12T				5	5		
CHILD TO	CHK0852W0P3	CISCO	Networking Devices	C3550-12T				5	3		

CONFIGURATION ITEM RELATIONSHIPS											
Serial Number: CHK0847V1FQ		Model: C3550-12T		Urgency: 5		Impact: 5					
Manufacturer: CISCO		City:		State:		Zip:					
Configuration Item: Networking Devices		Type: Core Switch 1		Description: Core Switch 1		Zip:					
Relationship Type	Serial Number	Manufacturer	Configuration Item Type	Model	City	State	Zip Code	Urgency	Impact	Add/Remove	
PARENT TO	ECHK3471024	INTEL	Server	SE7501CW2				5	5		
PARENT TO	BZDS72300030	INTEL	Server	SE7501CW2		VA		5	5		
PARENT TO	ECHK4490481	INTEL	Server	SE7501CW2				5	5		
PARENT TO	ECHK4490327	INTEL	Server	SE7501CW2				5	5		
PARENT TO	FOC0649Y112	CISCO	Networking Devices	C2950T-24				5	3		

CENTRE CMMI 1.2 Artifacts for Process Improvement

CENTRE Configuration Management is not limited to hardware asset management. Any CENTRE Records may be defined as Configuration Items and hence be subject to Change management.

SELECT CONFIGURATION ITEM SOURCE			
Configuration Item Source	Source Table Name	Key Column Name	Search Page Path
<input type="radio"/> Contract Assets	ContractEquipment	ContractEquipmentID	../AdmNavBar/SearchContractEquipment.asp
<input type="radio"/> Incidents	SrvCall	SrvCallID	../SvcNavBar/ServiceCallDetailSearch.asp
<input type="radio"/> Problem	Problem	ProblemID	../Problem Management/SearchProblem.asp
<input type="radio"/> Scan Request	ScanRequest	ScanRequestID	../Problem Management/SearchScanRequest.asp
<input type="radio"/> Software Requirement	Requirement	RequirementID	../AdmNavBar/SearchRequirement.asp

In the screen above we see that Incidents, Problem, Scan Requests and Software Requirements are defined as such, in addition to Contract Assets.

SP 1.2 Establish and maintain a configuration management and change management system for controlling work products.

CENTRE Evidence: The Configuration and Change Management modules and related records are the direct evidence in compliance with this Specific Practice.



SP1.3 Create or release baselines for internal use and for delivery to the customer.

CENTRE Evidence: Configuration baselines are Project specific. The referenced modules can contain records that are defined as “baselines.” These records may be specifications documents (contained in the Document Control System), releases (contained in Release records), or other specification parameters applicable to Configuration Items.

Documents,

DOCUMENT#	TITLE	AUTHOR
959-V5	ITG 27001:2005 Information Security Management System Manual - Executive Management	Michael Angelakis

Releases,

VIEW SOFTWARE RELEASE

Software Release Name: 4.6.8		Program: ITG CENTRE
Release Sequence: 47		Status: Open
Estimated Release Date: 7/22/2008		Release Type:
		Actual Release Date:
Objective Pre Release Defects Parameter 10	Objective Post Release Defects Parameter 10	
Objective Pre Release Defects: 15	Objective Post Release Defects: 8	
Estimated Pre Release Defects (calculated): 17.1486	Estimated Post Release Defects (calculated): 9.74744	
Actual Pre Release Defects (calculated): 35	Actual Post Release Defects (calculated): 3	
Estimated Pre Release Defects Per Hour (calculated): 0.016	Estimated Post Release Defects Per Hour (calculated): 0.009	
Estimated Development Hours (calculated): 1081.348	Actual Post Release Defect Hours Per Hour (calculated): 0.000	
Actual Development Hours (calculated): 1263.95	Actual Post Release Defect Hours (calculated): 0	

Statistics for Estimated Pre Release Defects Per Hour: Variance: 0.002 Standard Deviation: 0.047	Statistics for Estimated Post Release Defects Per Hour: Variance: 0.001 Standard Deviation: 0.029
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Configuration: Hostname: ITG_CENTRAL - MAC: 00-04-23-AE-8D-EA
 IP: 192.168.4.131 - OS: Server 2003 Service Pack 2
 Processor: Xeon 2.66 GHz - RAM: 3.75 GB

Specifications,

VIEW CONFIGURATION ITEM

Contract #: 5263-000 POC: Sung Yoon AIR POC: Serial #: ECHK4490327 Serial # Log Serial # Summary Old Serial #: Item Type: Server Subcomponent: None Model: SE7501CW2 Description: ITG_CENTRAL Manufacturer: INTEL Quantity: CLIN: Asset Tag: 505765 Urgency: 5 Impact: 5 Priority: 5	POC Phone: AIR POC Phone: Price: Price Type: Warranty Start: Warranty End: Agency: Site/Location: Address2: City: State: Z Lifecycle Status: None Response SLA Hours: 0 On-Site SLA Hours: 0 Repair SLA Hours: 0 Sales Order #:
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SP 2.1 Track change requests for the configuration items.

CENTRE Evidence: All Configuration Items contain relevant change management data.

RFCs for this CI

Change Request Name	Change Authority
Change part order and sales order screens to enable insertion of items in the CMDB	Software Engineering MRB

Change Request

Configuration Items

CI Source

Configuration Item Source Type	Configuration Item Source	KeyColumn Value
Change Request	Software Requirement	1209

Requirement Description: 10/7/2008 6:05:53 PM Entered by:Hadjikyriakou, George on behalf of Giovanni and Pat Z.

CENTRE CMMI 1.2 Artifacts for Process Improvement

SP 2.2 *Control changes to the configuration items.*

CENTRE Evidence: The direct evidence for compliance with this Specific Practice is the ability of a Project Manager to disallow changes to Configuration Items at the Contract Level. Upon enabling this feature CMDB records can not be modified without a corresponding Change Request.

VIEW CONTRACT

*The mandatory editing fields are indicated with an asterisk **

*Contract Number: 5263-000	PPM Rate: 0	*Expires: 12 - 31 - 2010	Closed
*CO: George Hadjikyriakou	OPPM Rate: 0	Days Extended:	<input type="checkbox"/> External Da
*CO Phone: 703-698-8282 Ext: 231	Sunday Rate: 0	PPM Hours: 14	<input checked="" type="checkbox"/> Use PPM H
Customer Name: ITG DEFAULT	Minimum: 0	Days of Service: 365	<input checked="" type="checkbox"/> Include Sat
COTR:	Billable: <input type="checkbox"/> NO	PPM Hours Start: 07 00	<input checked="" type="checkbox"/> Include Sur
COTR Phone: Ext:	Travel: <input type="checkbox"/> NO	PPM Hours End: 21 00	<input checked="" type="checkbox"/> Include Hol
COTR Email:	Taxable: <input type="checkbox"/> NO		Send email noti
BDM: OTHER	Non-Revenue: <input checked="" type="checkbox"/> YES	*Response SLA Hrs: 24	Email TAM @ 75 % Time La
Customer Contract #:	CI RFC Required: <input type="checkbox"/> NO	*On-Site SLA Hrs: 0	Email TAM @ 0 % Time La
Contract Modifications: 0	*Contract Status: Active	*Repair SLA Hrs: 48	Email TAM @ 75 % Time La
TAM: Dave Lovelace	Last Modified: 7/15/2008 11:34:58 AM		Contract Docu
Last Modified By: Rigney, Jason R.			Contract Cost/

Invoice Address

CI RFC Required: NO

CI RFC Required: YES

SP 3.1 *Establish and maintain records describing configuration items.*

CENTRE Evidence: All relevant records are established and maintained in the CENTRE referenced modules.

SP 3.2 *Perform configuration audits to maintain integrity of the configuration baselines.*

CENTRE Evidence: This is a functional human resource requirement. At this time there isn't an automated CENTRE methodology to perform configuration audits. Internal CMMI appraisals and ISO internal audits supported by relevant procedures and work instructions would provide records that would satisfy the requirements of this Specific Practice.