CENTRE TM (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)

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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.

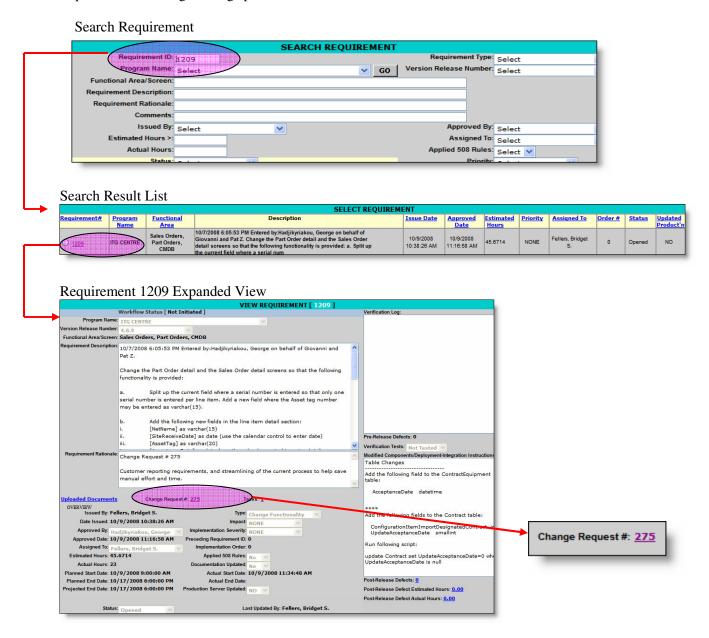
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CENTRE CMMI Specific & Generic Evidence Elements:

CENTRE – Requirements Development

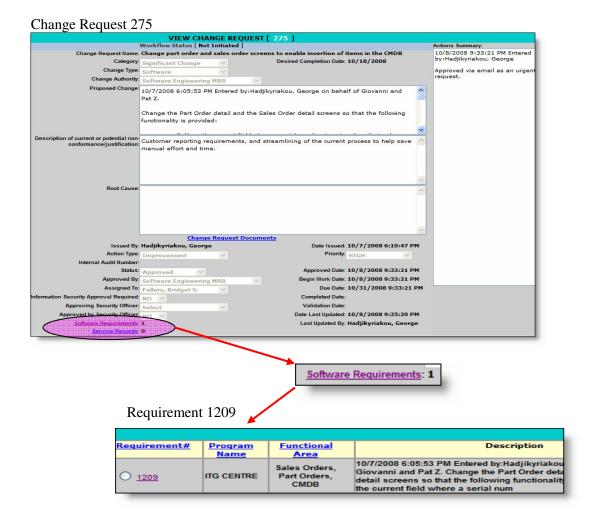
SP 1.1 Elicit stakeholder needs, expectations, constraints, and interfaces for all phases of the product lifecycle.

CENTRE Evidence: While Stakeholders needs typically emerge from Statements of Work, the CENTRE Requirements Module, tightly integrated with the Change Management module, provides for the transformation and management of stakeholders needs into functional requirements and engineering specifications.



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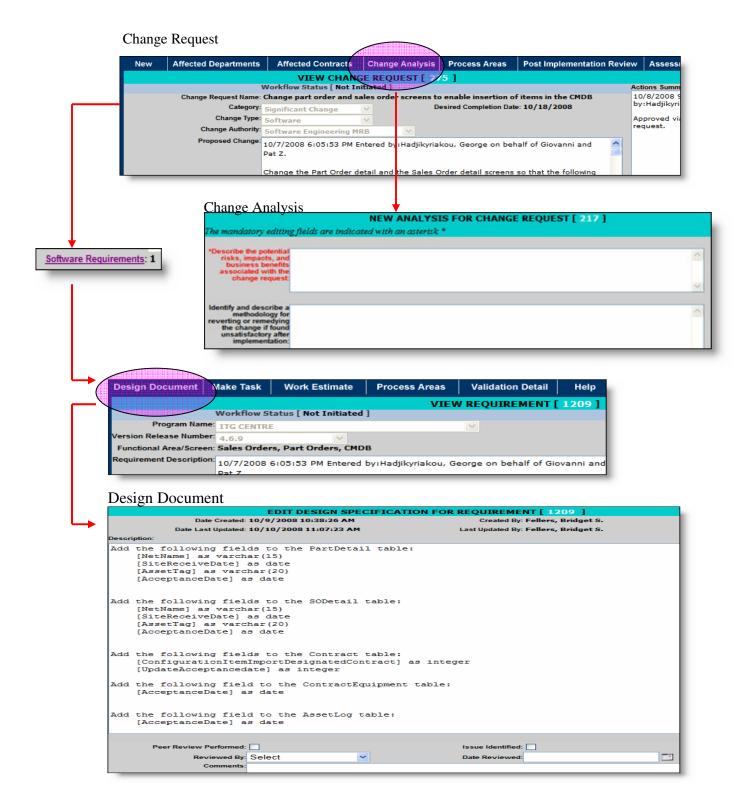
As seen from the expanded view, this requirement is a result of change request 275.



SP 1.2 Transform stakeholder needs, expectations, constraints, and interfaces into customer requirements.

CENTRE Evidence: The needs, constraints, expectations and interfaces are defined at the Change Request and Requirement levels.

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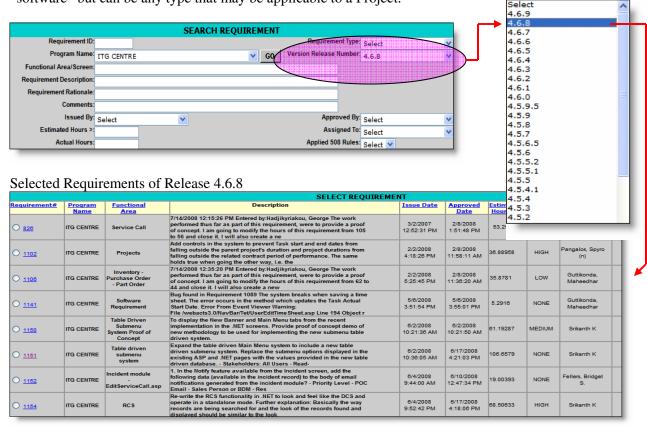
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SP 2.1 Establish and maintain product and product component requirements, which are based on the customer requirements.

CENTRE Evidence: As seen above, the CENTRE Requirements module provides the direct evidence for this Specific Practice.

SP 2.2 Allocate the requirements for each product component.

CENTRE Evidence: CENTRE Requirements are allocated by release version and can be used as direct evidence for conformance with this Specific Process. The requirements need not be "software" but can be any type that may be applicable to a Project.



Summary of release 4.6.8

VIEW SOFTWARE RELEASE					
Software Release Name: 4.6.8	Program: ITG CENTRE				
Release Sequence: 47	Status: Open				
	Release Type:				
Estimated Release Date: 7/22/2008	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:	Statistics for Estimated Post Release Defects Per Hour				
Variance: 0.002	Variance: 0.001				
Standard Deviation: 0.047	Standard Deviation: 0.029				

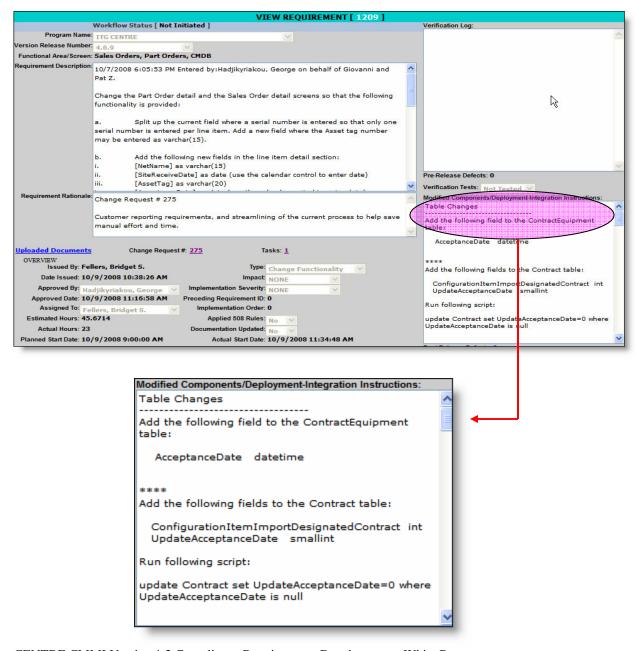
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SP 2.3 Identify interface requirements.

CENTRE Evidence: Interface requirements may be identified in the body of the functional requirement.

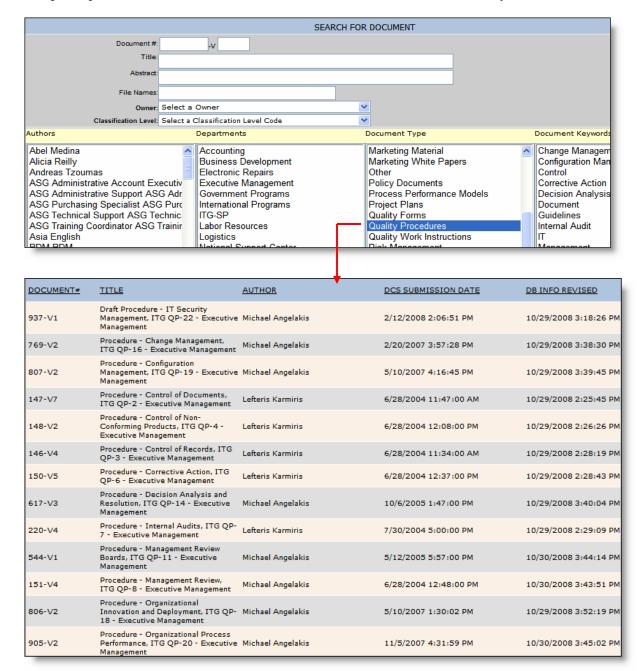
SP 3.1 Establish and maintain operational concepts and associated scenarios.

CENTRE Evidence: Direct evidence for this Specific Practice is contained in the Requirements module Modified Components/Deployment Integration Instructions text box. The **CENTRE** Document Control System contains documentation which provides guidance applicable to this Specific Practice.



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Sample of process documentation included in the CENTRE Document Control System (DCS)



SP 3.2 Establish and maintain a definition of required functionality.

CENTRE Evidence: The required functionality description is typically contained in the Statement of Work and is transformed directly into functional requirements, or into change requests that once approved become functional requirements. The direct evidence for this Specific Practice is contained in the Change and Requirement descriptions text boxes.

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SP 3.3 Analyze requirements to ensure that they are necessary and sufficient.

CENTRE Evidence: The direct evidence provided to satisfy this Specific Practice are the Change and Requirements approval processes, documented in the corresponding modules as well as in Management Meeting minutes.

	SELECT MEETING					
Meeting Name	Number of Sessions	Open Action Items	Closed Action Items	Action Items On Hold		
O ADMC-2 Program Meetings	<u>3</u>	<u>3</u>	<u>23</u>	<u>1</u>		
O CENTRE Release Training	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>		
O CMMI Compliance Matrix Review	22	<u>3</u>	<u>30</u>	<u>0</u>		
O CMMI Process Meetings	<u>3</u>	<u>0</u>	<u>0</u>	<u>o</u>		

SP 3.4 Analyze requirements to balance stakeholder needs and constraints.

CENTRE Evidence: The direct evidence provided to satisfy this Specific Practice are the Change and Requirements approval processes, documented in the corresponding modules as well as in Management Meeting minutes.

SP 3.5 Validate requirements to ensure the resulting product will perform as intended in the user's environment.

CENTRE Evidence: The direct evidence for Requirements Validation provided to support this Specific Practice is contained in the validation submenu selection of the Requirements Module.

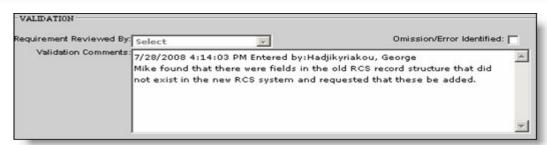
Requirement Process Areas Validation Detail VIEW REQUIREMENT [1090] Verification Log: 03/29/2008 4:51:44 PM Entered by:Hadjikyriako Verification Test = Passed nal Area/Screen: View Project Financials It was recommended by GEorge H. and Mike agreed to do the following Separate out the following Cost Categories into a another data grid: When estimate values are entered on future months the system should not update previous months. 4. Expand the edit fields to display the entire value as entered by the user in both Pre-Release Defects: 4 le: Change Request # 146 Copy the latest project financials from ..\tet\Project Financials\01-11-2008\ folder from Source Safe. Root Cause: The values displayed in the last three columns on the current grid do not make any inple: 1/9/2008 11:03:50 AM

d By: Haddilhyriakou, George

Date: 1/9/2008 11:03:57 AM

Preceding Requirement ID:

d To: Gatthough: Mahadilar and the Company of the Company Date Issued: 1/9/2008 11:03:50 AM Assigned To:



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