1. Does the tool facilitate the management of the full lifecycle of Release and Deployment Management? For example, planning, building, testing, quality assurance, scheduling and deployment?

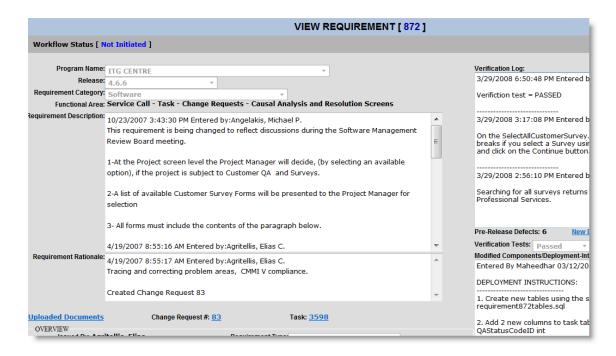
Comments: Yes. The proposed release methodology makes use of CENTRE Change Management, Configuration Management, Requirements Management, Projects (which includes software tasks and labor), Microsoft Essentials, and Source-safe software. Planning and building a release begins with a Request for Change (RFC) which when approved, creates the software requirement (which then becomes a task in the release project). The requirement is mapped to a release, created, tested, and verified. Quality metrics are captured during the build, testing and verification, and, during a set period after the deployment of the release.

	VIEV	V CHANGE REQUEST [83]		
Workflow Status [Not Initiated	1				
Change Request Name	Causal Analysis and Resolution				Actions Summary:
	Standard Change		Desired Completion Date: 5/	/31/2007	10/23/2007 11:00:47 AM Enter
Change Type	Software *				by:Hadjikyriakou, George
	Software Engineering MRB	·			Mike A. Will define a software
Proposed Change Description of current or potential non- conformance justification Root Cause	4/19/2007 8:55:16 AM Entered be Requested by: Angelakis, Michae Add Customer Survey functionali will be links to the survey screen modified to include a new set of the following sections: With this implementation we will feature is required for CMMI V co	If ty to Tasks and Change Reques on all three screens. The exisi Causal Analysis and Resolution be able to track and correct pro	ing Survey screens will be fields as described below in	A	requirement to be reviewed by SMRB for approval. Created SW Requirement 872
		Change Request Documents			
Issued By:	Angelakis, Michael P.		Date Issued: 4/	19/2007 11:36:49 AM	
Action Type:	Improvement *		Priority: N	ONE *	
Internal Audit Number					
	Closed ▼			0/23/2007 11:00:47 AM	
	Software Engineering MRB	*	-	9/2008 9:00:00 AM	
	Hadjikyriakou, George 🔻			29/2008 6:00:00 PM	
Information Security Approval Required: Approving Security Officer:	NO.		•	729/2008 6:00:00 PM 717/2009 2:05:27 PM	
			•	•	
Approved by Security Officer	110			17/2009 2:05:52 PM	
Requirements: Service Records:			Last Opdated By: Ar	gelakis, Michael P.	

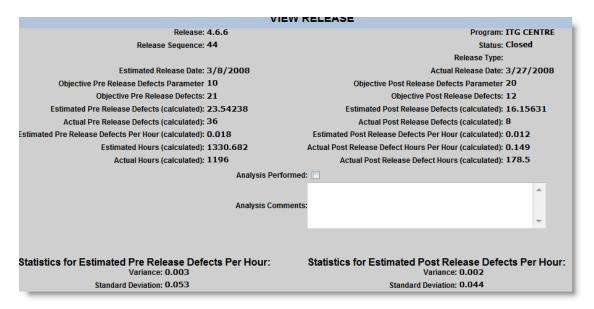
The request is linked to associated configuration items

CONFIGURATION ITEM SOURCE RECORDS				
Configuration Item Source Type Configuration Item Source Key Column Value				
Change Request	Requirement	<u>872</u>		

If the RFC is a software change, it becomes a software requirement with linkage to the RFC.



The requirement is subject to testing, validation, verification and deployment instructions. Upon passing all of the above it is assigned to a release:



2. Does the tool facilitate the establishment and governance of release readiness criteria? For example, the ability to establish tasks or auditable requirements which support the decision process for determining if all release requirements have been met for deployment approval.

Comments: Yes. A release is designed from SW requirements which are supported by change management and management board review and approval. SW requirements

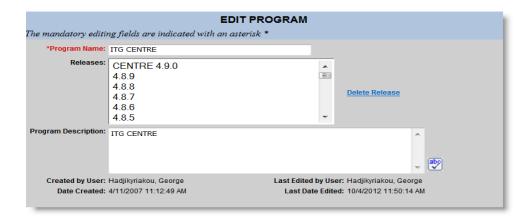
include tasks and auditable activities to meet deployment readiness criteria. As the SW requirement moves through its phases (planning and design, development, verification testing, and documentation), labor hours are captured to each phase by employee. All SW requirements to a release are bundled for deployment approval.

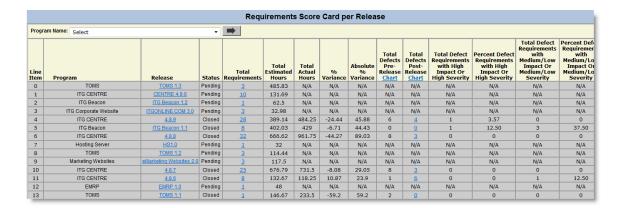
VIEW	TELEASE
Release: 4.6.6	Program: ITG CENTRE
Release Sequence: 44	Status: Closed
	Release Type:
Estimated Release Date: 3/8/2008	Actual Release Date: 3/27/2008
Objective Pre Release Defects Parameter 10	Objective Post Release Defects Parameter 20
Objective Pre Release Defects: 21	Objective Post Release Defects: 12
Estimated Pre Release Defects (calculated): 23.54238	Estimated Post Release Defects (calculated): 16.15631
Actual Pre Release Defects (calculated): 36	Actual Post Release Defects (calculated): 8
Estimated Pre Release Defects Per Hour (calculated): 0.018	Estimated Post Release Defects Per Hour (calculated): 0.012
Estimated Hours (calculated): 1330.682	Actual Post Release Defect Hours Per Hour (calculated): 0.149
Actual Hours (calculated): 1196	Actual Post Release Defect Hours (calculated): 178.5
Analysis Performed	: <u> </u>
	_
Analysis Comments	
Analysis Comments	
	▼
Statistics for Estimated Pre Release Defects Per Hour: Variance: 0.003	Statistics for Estimated Post Release Defects Per Hour: Variance: 0.002
Standard Deviation: 0.053	Standard Deviation: 0.044

3. Does the tool incorporate or integrate with a Definitive Media Library (DML)?

Comments: Yes. The DML is maintained in CENTRE which maintains all DML CI's. All Release versions are securely maintained and cataloged. Modification to source code is securely controlled using Microsoft Source Safe applications. Source Safe provides backup and requisite audit trails of all release source modifications.

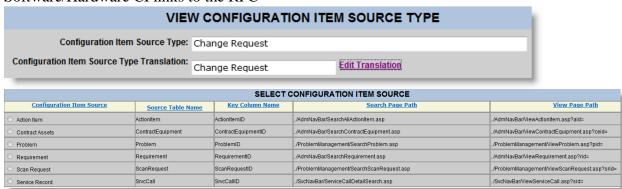
SELECT PROGRAM					
Program Name	Description	Created By	Date Created	Last Edited By	<u>Last Date Edited</u>
Bridge Server	Bridge Server	Hadjikyriakou, George	4/25/2007 4:04:29 PM	Hadjikyriakou, George	4/30/2007 2:04:29 PM
O CMMI CENTRE	The productization and packaging of CENTRE as a CMMI Solution for marketing, downloadable from an online shopping website.	Hadjikyriakou, George	6/17/2009 11:04:04 AM	Hadjikyriakou, George	6/18/2009 2:03:59 PM
DCMA Migration Technical Solution	DCMA Migration Technical Solution - To inloude all software, scripts, OS image CD/DVD, Procedures, Cabling, Test desktops, Test Procedures, etc	Hadjikyriakou, George	12/3/2007 2:28:33 PM	Agritellis, Elias	3/6/2008 11:05:03 AM
O DCS	Document Control System				
Email Parser Desidop	Program to detect, identify, parse, and record the data captured from the body of the email into a databse table.	Hadjikyriakou, George	5/11/2011 5:48:42 PM	Hadjikyriakou, George	5/26/2011 4:24:37 PM





As changes are included in a release, DML CI's are linked to the change record.

Software/Hardware CI links to the RFC



4. Does the tool support workflow integration with a DML to support release deployment and provisioning activities?

Comments: Yes. To support DML release activities, CENTRE has a workflow module which classifies actions for workflow which is presented on the user's home screen. Workflow activities are: issued, approved, opened, testing, and closed.

Home Screen Workflow Indicator Box

WORKFLOW SUMMARY		
Pending Actions	<u>o</u>	
Initiated	<u>2</u>	
Completed	0	
Expired	0	
Cancelled	0	

5. Does the tool facilitate the building, bundling and scheduling of different types of Release packages for deployment?

Comments: Yes. CENTRE is designed to bundle and schedule Delta, Full, and Package Releases.

VIEW	RELEASE		
Release: 4.8.9	Program: ITG SENTRE		
Release Sequence: 84	Status: Closed Release Type: Delta		
Estimated Release Date: 3/31/2013	Actual Release Date: 10/19/2013		
Objective Pre Release Defects Parameter 10	Objective Post Release Defects Parameter 10		
Objective Pre Release Defects: 4	Objective Post Release Defects: 7		
Estimated Pre Release Defects (calculated): 5.319882	Estimated Post Release Defects (calculated): 8.194377		
Actual Pre Release Defects (calculated): 6	Actual Post Release Defects (calculated): 4		
Estimated Pre Release Defects Per Hour (calculated): 0.014	Estimated Post Release Defects Per Hour (calculated): 0.021		
Estimated Hours (calculated): 389.1401	Actual Post Release Defect Hours Per Hour (calculated): 0.047		
Actual Hours (calculated): 484.25	Actual Post Release Defect Hours (calculated): 23		
Analysis Performe	d: ▽		
	See our new module developed to track defects along		
Analysis Comment	s: with information to identify defect injection and		

6. Does the tool facilitate the flexible identification and control of all aspects of a release package such as software, hardware, documentation, training requirements, etc.?

Comment: Yes. Releases are the accumulation of change requests. Change requests' maintain CI links to software requirements and hardware. The software requirements identify documentation and training requirements.

Software/Hardware CI links to the RFC

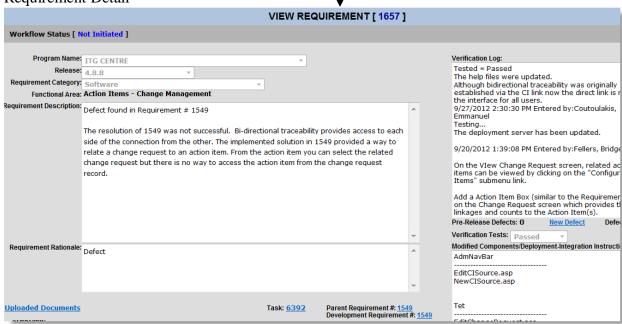


Software Release Requirements Score Card per Release Program Name: Select - -Requirements with Medium/Low Impact Or Medium/Low Severity Total Defect Percent Defe Requiremen with High Requiremen with High Total Estimated Hours Total Absolute Impact Or High Severity Actual Hours Impact Or High Severity % Variance Status Pending TOMS 485.83 N/A N/A ITG CENTRE Pending 131.69 N/A N/A N/A N/A N/A N/A N/A N/A Pending 62.5 N/A N/A N/A N/A N/A N/A N/A N/A 32.98 ITG CENTRE Closed 389.14 484.25 -24.44 45.88 3.57 ITG Beacon Closed 402.03 429 -6.71 44.43 12.50 Pendino 32 N/A N/A N/A N/A TOMS 114.44 N/A N/A N/A N/A N/A N/A N/A N/A Marketing Websites 117.5 N/A N/A N/A N/A N/A 731.5 -8.08

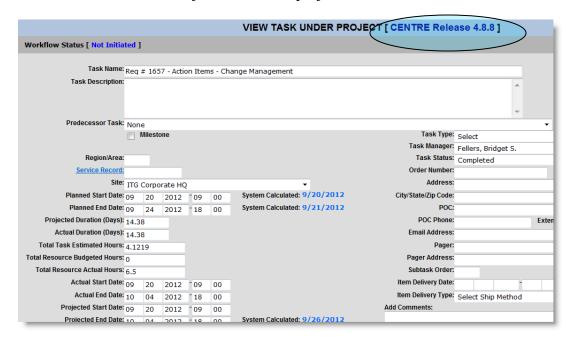
Requirements to a Release



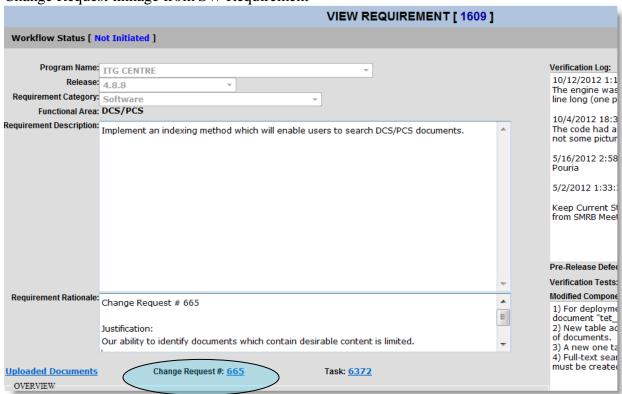
Requirement Detail



Task under the Release Project to track the project and labor hours

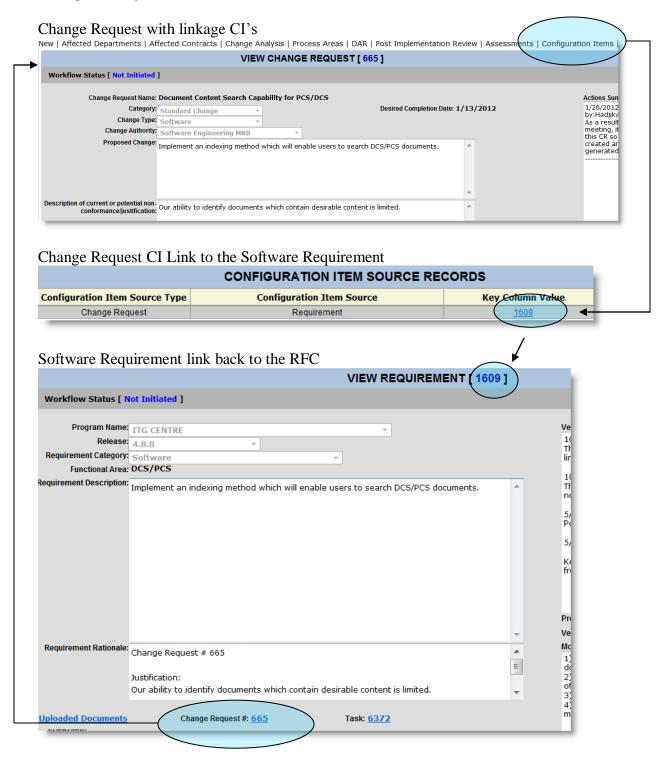


Change Request linkage from SW Requirement



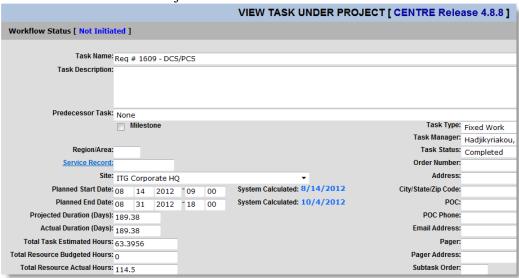
7. Does the tool facilitate the authorization and scheduling of Release deployments in conjuncture with a Change Management process and tool?

Comments: Yes. Release deployments are orchestrated and built from the Change Management System.

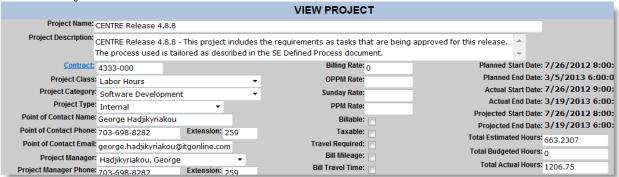


The task links back to the Project (CENTRE Version Release) for the capture of costs including labor hours.

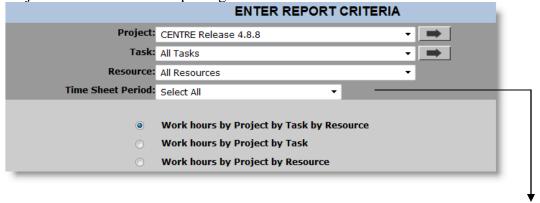
Task under the Release Project



Release Project



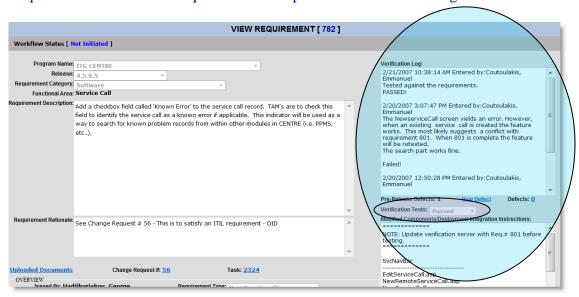
Project Costs and Hours Reporting



WORK HOURS BY PROJECT BY For Time Sheet Period = [All Ti				
Project:CENTRE Release 4.8.8				
Task:Pre-Release Verification Testing		Start Date:7/26/2012 9:00:00 AM End Date:3/19/2013 6:00:00 PM		
Resource Name		Work Hours		
Agritellis, Elias		0		
Coutoulakis, Emmanuel		156.5		
Fellers, Bridget S.		9.5		
Hadjikyriakou, George		8		
Mohammad Javaheri, Pouria		10.5		
	Task Hours:	184.5		
Task:Project Administration and Management		6/2012 9:00:00 AM 6/2013 6:00:00 PM		
Resource Name		Work Hours		
Fellers, Bridget S.		0		
Hadjikyriakou, George		65		
	Task Hours:	65		
Task:Req # 1609 - DCS/PCS		I/2012 9:00:00 AM I/2013 6:00:00 PM		
Resource Name		Work Hours		
Fellers, Bridget S.		17.5		

8. Does the tool facilitate the enforcement and coordination of Release validation and testing activities?

Comments: Yes. Release validation and testing activities are recorded within the SW Requirement record. The requirement must pass the validation testing to be released.



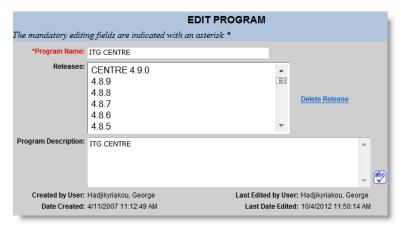
Validation Review



9. Does the tool facilitate the versioning of Release components and packages?

Comments: Yes. All releases are controlled and versioned.

SELECT PROGRAM					
Program Name	Description	Created By	Date Created	Last Edited By	<u>Last Date Edited</u>
Bridge Server	Bridge Server	Hadjikyriakou, George	4/25/2007 4:04:29 PM	Hadjikyriakou, George	4/30/2007 2:04:29 PM
O CMMI CENTRE	The productization and packaging of CENTRE as a CMMI Solution for marketing, downloadable from an online shopping website.	Hadjikyriakou, George	6/17/2009 11:04:04 AM	Hadjikyriakou, George	6/18/2009 2:03:59 PM
DCMA Migration Technical Solution	DCMA Migration Technical Solution - To inIcude all software, scripts, OS image CDIDVD, Procedures, Cabling, Test desktops, Test Procedures, etc	Hadjikyriakou, George	12/3/2007 2:28:33 PM	Agritellis, Elias	3/6/2008 11:05:03 AM
O DCS	Document Control System				
Email Parser Desktop	Program to detect, identify, parse, and record the data captured from the body of the email into a databse table.	Hadjikyriakou, George	5/11/2011 5:48:42 PM	Hadjikyriakou, George	5/26/2011 4:24:37 PM



10. Does the tool facilitate the management of the rollback of release packages to previous versions?

Comments: Yes. Release deployments are a specific list of the requirements that made the deployment. These requirements identify and facilitate the rollback of a release package. Requirements include RFC's and associated CI's.

Integration Criteria

Terminology

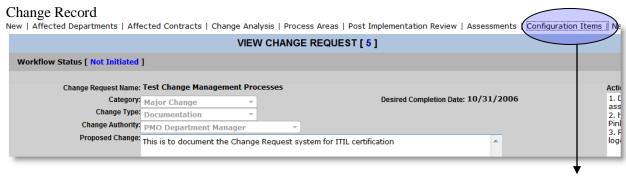
1. Does the tool's use of terms and definitions align with ITIL terms and definitions?

Comments: Yes. CENTRE has been certified as compliant with ITIL v2 in Incident, Problem, Change, and Configuration Management

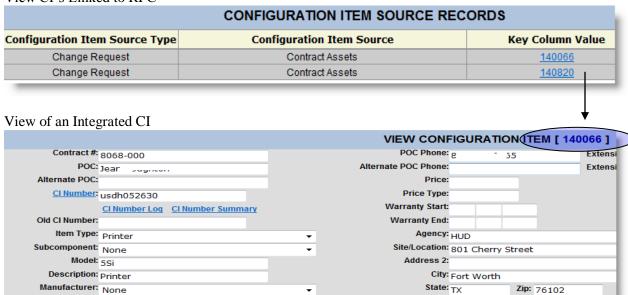
Configuration Management

1. Does the tool integrate with the CMDB to gather or validate required information for Release builds and deployment activities?

Comments: Yes. Change requests and software requirements are linked to the associated release CMDB CI for the validation and updating of release CMDB data.



View CI's Linked to RFC



2. Does the tool facilitate the update of the CMDB with new version and CI information after the deployment of a Release?

Comments: Yes. The tool facilitates the update of CMDB by maintaining direct links to all associated change requests and SW requirements after the deployment of a release. Change Request Links to the CMDB. Additionally, 'MS Essentials' will produce a report of device configurations for input into the CMDB.

View CI's Linked to RFC

CONFIGURATION ITEM SOURCE RECORDS						
Configuration Item Source Type	Configuration Item Source	Key Column Value				
Change Request	Contract Assets	<u>140066</u>				
Change Request	Contract Assets	<u>140820</u>				

3. Does the tool integrate with CMDB to support the association of Release records to CI records?

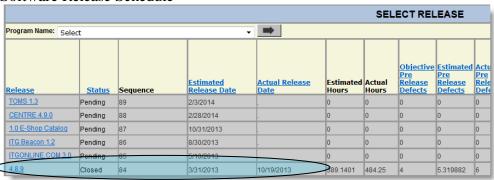
Comments: Yes. As listed in previous statement, the release record links back the RFC which links to the effected CI.

Change Management

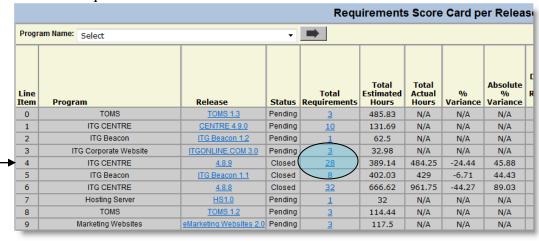
1. Does the tool ensure that Release deployments are subject to scheduling and approvals requirements managed by the Change Management process?

Comments: Yes. The change management process maintains links to the SW Requirements which are included in the scheduling and approvals required for the management of deployments.

Software Release Schedule



Software Requirements for the Release



Software Requirement Listing for the Release

				rtoqu	ii ciii ciito c oo	re Card for Program [02	1 - 100	10030 [4.0.3]			
ine I	Requirement ID	ıt ^{Tasl}	s Status	Assigned To Resource	Requirement Type	Validation By	Requirement Review Issues Identified	Peer Review Issues Identified	Resource Conducted Peer Review	Total Estimated Hours	Total Actual Hours	% Variance
1	<u>1458</u>	1	Closed	Hadjikyriakou, George	New Functionality	Agritellis, Elias	Yes	Yes	Software Group	79.75	178.5	-123.82
2	<u>1493</u>	1	Closed	Mohammad Javaheri, Pouria	New Functionality	Mohammad Javaheri, Pouria	No	No	Hadjikyriakou, George	62.17393	69	-10.98
3	<u>1523</u>	1	Closed	Fellers, Bridget S.	New Functionality	Coutoulakis, Emmanuel	No	No	None	71.1011	90	-26.58
4	<u>1648</u>	1	Closed	Fellers, Bridget S.	New Functionality	Coutoulakis, Emmanuel	No	No	None	10.63027	15	-41.11
5	<u>1701</u>	1	Closed	Fellers, Bridget S.	Defect	Coutoulakis, Emmanuel	No	No	Hadjikyriakou, George	2.32665	5.5	-136.39
6	<u>1711</u>	1	Closed	Fellers, Bridget S.	Defect	Fellers, Bridget S.	No	No	Hadjikyriakou, George	2.7511	1	63.65
7	<u>1712</u>	1	Closed	Fellers, Bridget S.	Defect	Coutoulakis, Emmanuel	No	No	Hadjikyriakou, George	5.5022	8	-45.4
8	<u>1715</u>	1	Closed	Mohammad Javaheri, Pouria	Change Functionality	Mohammad Javaheri, Pouria	No	No	Hadjikyriakou, George	2	2.5	-25
9	1716	1	Closed	Fellers, Bridget S.	Defect	Coutoulakis, Emmanuel	No	No	Hadjikyriakou, George	1.5511	0.5	67.76
•				- " - " - " - "		- " 1					~ -	

Software Requirement Link to the Change Request

	VIEW REQUIREMENT [1523]
Workflow Status [N	lot Initiated]
Program Name:	TIG CENTRE
Release:	
Requirement Category:	
Functional Area:	HR Certifications and Course Scheduling
Requirement Description:	The certifications section of CENTRE (which is currently a listing of courses and certifications that a labor resource has completed/acquired) should be categorized as either Internal or External to simplify entry as the list of entries has become very long. Courses will have a listing of resources that will be categorized as mandatory attendees. These will be assigned by individuals or groups or departments. (Design ideas need to be discussed for ease-of-use and ease-of-entry) Also, a new addition should be made to the Labor Resources section of CENTRE to enable the scheduling of courses both internal and external. These entries would be tied directly to their entries in the Certifications table of the HR Profile. HR would enter the page and create a new entry by: - Selecting Internal or External (this would filter the course list to ensure more accurate
Requirement Rationale:	Change Request # 589 Justification: Currently the Course scheduling is done outside of CENTRE. It would be a great addition to
<u>Uploaded Documents</u>	Change Request #: 589 Task: 6633

Change Request with Approval, Begin Work, Due, Validation Completion, and Desired Completion Dates



Optional Criteria

1. Does the tool facilitate the automated updating of the CMDB based prior to or following an approved release?

Comments:

2. Does the tool facilitate the management and tracking of software licenses?

Comments:

3. Does the tool have the capability to handle varying Release models such as large-scale or phased deployments?

Comments:

Revised 12/27/2013