



Sandia Summer

SAND2010-5607C

Summer Internship In Center 400: Surety Assessment & Engineering

Summer 2010

Shane Fullman

Summer Intern

Org: 00422

Manager: J Anthony Wingate





Shane Fullman

- **Hometown: Phoenix, Arizona**
- **Attending Texas A&M University**
- **Graduation: 2012 Expected B.S. in Electrical Engineering**



Summer Experiences

• **NQT Picture Review**- finding replacement pictures for NQT-400

• **Data Control**- getting data from QERs into Oracle to create assessment group metrics

• **Monday Morning Training Analysis**- looking at Monday morning training sessions for ways to improve them

• **Survey Development**- creation of surveys for use in Monday training and Center 400

• **Standard Work Creation**- creation of Product Qualification

Monday Standard Work for Dennis Analysis and Report

• **Engineering Experiences**- Things we got to see and do

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Module-
4

http://commons.wikimedia.org/wiki/File:RMS_Titanic_2.jpg

Sandia National Laboratories **ORACLE** E-Business Suite

Inside Oracle E-Business Suite

Please take a moment to complete this evaluation form. Your feedback will help us improve the Center Website.

1. How useful is the information presented on the website?	5. Would a fifteen minute tutorial on the website be helpful?
2. How organized and easy to find is the information?	6. How often do you use the Center Website?
3. The amount of information presented?	7. Have you used the website SEARCH ability?
4. Do you consider the website value added to the center?	8. Is having a usable website important to you?
9. What information needs to be corrected, added, removed, or updated?	11. What is most valuable about this website?







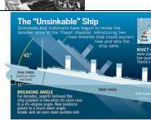
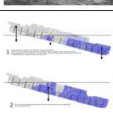


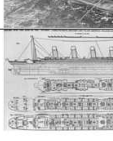
Submit may not work properly unless the document is opened in Adobe Reader or Pro.

Submit by Email

NQT Picture Review

- Found pictures to replace all copyright material
- Approximately 150 pictures replaced
- Gave locations of the pictures making the documents easier to use
- Reduced the time it took to meet with creative arts

Also discussed different picture options in meetings with Creative Arts Dept.



	Module 2- slide 5		http://commons.wikimedia.org/wiki/File:Thomas Andrews %C3%BC.jpg
	Module 2- slide 5		http://commons.wikimedia.org/wiki/File:Bruce Ismay.jpg
	Module 2- slide 11		http://commons.wikimedia.org/wiki/File:Titanic the sinking.jpg
	Module 3- slide 6		http://commons.wikimedia.org/wiki/File:Titanic-sinking.png
	Module 4- slide 7		http://commons.wikimedia.org/wiki/File:Titanic-lifeboat.gif
	REN Module – slide 4		http://commons.wikimedia.org/wiki/File:RMS Titanic 2.jpg

1. Any image that has an equivalent that is marked as public use is in the first table.
2. Images can be purchased are listed in the second table.
3. Images where the source is unknown or not actively for sale are in the final tables.

Pictures that have a usable equivalent (These pictures were listed as "labeled for reuse" by Google)

Original Picture (currently in presentation)	Location in ppt: Stage or module#- page or slide #	New picture to replace it	URL
--	--	---------------------------	-----

Pictures that have a usable equivalent (These pictures were listed as "labeled for reuse" by Google or are from clipart) Other images from charging sites may be added as a second option

	Introduction		http://www.army.mil/-images/2007/09/13/7904/army.mil-2007-09-13-115126.jpg
		clipart	http://commons.wikimedia.org/wiki/File:RMS Titanic 1.jpg
		clipart	http://commons.wikimedia.org/wiki/File:Titanic-NYT.jpg
		clipart	http://commons.wikimedia.org/wiki/File:The Titanic 1.png
		clipart	http://commons.wikimedia.org/wiki/File:Lifeboats leaving.jpg
		clipart	http://www.istockphoto.com/stock-illustration-5481947-solution-concept.php
		clipart	http://www.istockphoto.com/stock-photo-6125496



Data Control

Data searching and entry

Expected time to complete: three weeks

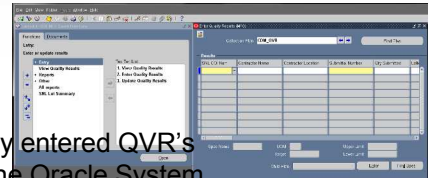
Actual time to complete: one week

Task: Enter data from
QVRs into Oracle
system

This was a one time deal, all newly entered QVR's
will automatically be entered into the Oracle System
Worked with Errold Duroseau

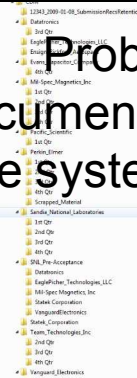


ORACLE E-Business Suite



Problem: finding
documents in complicated
file system takes a lot of
time

Only knew
where to
look for one
of the three
file levels



Solution: Put documents together;
•Compiled QVR's into one file and
search all of them at the same time
•Used Adobe OCR to make text
searchable

Automated
process caught
errors made by
previous
manual entry

This allowed me
to search all 400
QVRs at the same
time.



Monday Morning Training Analysis

Organized Results into full report
Compiled quantifiable results
which contains:

into charts

• Data

75% of people said training is useful in the workplace
63% average training usefulness

Most liked course was GD&I with 13 positive

• Opinions

• Course opinions

• Suggested Topics

• Observed Issues

• Suggested Action

Monday Morning Training
Analysis and Report

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Report in powerpoint
and document form

Monday-Morning-Training-Sessions-
Analysis-and-Report

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Overview

• Source
This report is the culmination of an extensive interview and discussion process. This report includes the responses from 26 interviews, 25 from 12/22 & 12/23. The remaining eleven interviews came from individuals in 12/24, 12/26 & 12/27 who have extended the training. This group should account for the vast majority of regular attendees. %

• Analysis
This report analyzes the information gathered and gives various data based results. These results are the quantifiable part of this survey. Each section highlights a different set of questions and attempts to summarize the results. %

• Conclusions
After presenting the data, conclusions are reached. These conclusions are refined from the responses given in the analysis and quantifiable opinions conveyed during the interviews and discussion. %

Question	Ever	Never
First training session (yrs)	1.54	
Time in OE (yrs)	11.7	
Time @ sandia (Yrs)	13.3	
Has any of the training been useful or helpful in your work?	0.75	
What Percent of the sessions would you consider useful	0.63	
What Percent of the sessions have you attended	0.50	
Do you feel that the training sessions are mandatory?	0.33	0.45
If the training sessions were not mandatory, would you still go?	0.45	0.52
(yes/no)(1/0) If not mandatory would you go?	0.45	0.52
Is the training worth the time spent? (yes/no)(1/0)	0.81	0.74

<https://sharepoint.sandia.gov/sites/Work/00supprojects/default.aspx>



Electronic Surveys

Center 400 Website Feedback

Please take a moment to complete this evaluation form. Your feedback will help us improve the Center Website.

1. How useful is the information presented on the website?

Very useful
Somewhat useful
Neutral
Somewhat useless
Very useless

2. How organized and easy to find is the information?

High
Very good
Neutral
Needs improvement
I had no idea what was going on

3. The amount of information presented?

Very satisfied
Somewhat satisfied
Neutral
Somewhat dissatisfied
Very dissatisfied

4. Do you consider the website value added to the center?

High
Very good
Neutral
Needs improvement
I had no idea what was going on

5. Would a fifteen minute tutorial on the website be helpful?

High
Very good
Neutral
Needs improvement
I had no idea what was going on

6. How often do you use the Center Website?

Daily
Weekly
Monthly
Yearly
I have no idea what website you are talking about

7. Have you used the website SEARCH ability?

Often
Sometimes
Not Applicable
Never used it
What search ability; never knew the search existed

8. Is having a usable website important to you?

It is very important
somewhat important
Neutral
Not really important
Not at all important

9. What information needs to be corrected, added, removed, or updated?

10. What could be done to improve or enhance the website?

11. What is most valuable about this website?

Submit may not work properly in Adobe
Submit by Email

with Maria Walsh

8 6/28/2010 3 4 4 3 4 4 Commu

Created Center 400

ap website Survey

ati .60 responses

ak •Relevant data

•Will be used for the

fil center ISO 9001

certification

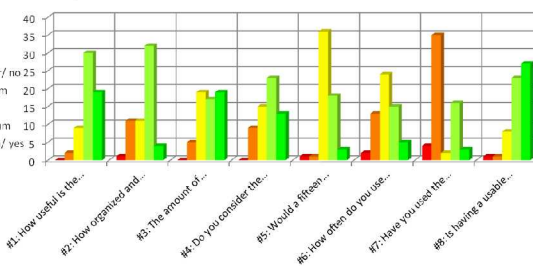
•Completed survey

very little cost

Worked with Peggy

Rhodes

Comparison of all the Questions



Standard Work Creation

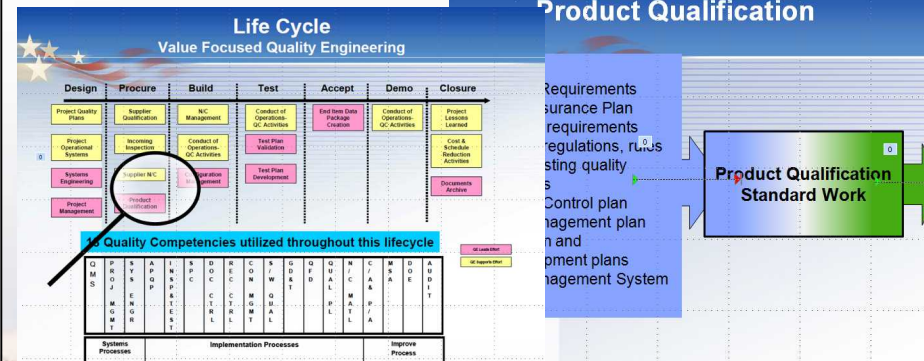
Create Standard Work: Product Qualification
In-depth look at how product qualification
should be done in Work for Others



Standard Work Process for Product Qualification	
1. Requirements Verification/ Management	<ul style="list-style-type: none"> A. Identify/ Negotiate customer requirements, specifics and expectations <ul style="list-style-type: none"> a) Clearly define customer requirements, specifics and expectations B. Identify other requirements necessary for described use C. Identify statutory and regulatory requirements D. Ensure requirements are properly documented controlled and maintained
2. Define Product- creation of product definition/conceptual design	<ul style="list-style-type: none"> A. Performance Requirements Review B. Ensure creation and control of product definition <ul style="list-style-type: none"> a) Ensure Technical Requirements meet above customer requirements b) Ensure definition meets customer requirements C. Requirements Mapping
3. Create Qualification Plan	<ul style="list-style-type: none"> A. Include expectations of particular supplier (what level of testing and documentation is required for a particular supplier) B. Work with PRT and other groups to Determine scope of PQ C. Draft Qualification Plan <ul style="list-style-type: none"> a) Plan should intend to prove: <ul style="list-style-type: none"> i. Product Quality- created without defects ii. Reliability- longevity, durability iii. Meets requirements- customer and technical b) Use Mission Assurance Plan and NW RPPs c) If applicable, include plans for: ESH, Testing, Training, Equipment, Security, Assessments, Infrastructure, Reliability, Budget, Conduct of Operations, Requirements, Suppliers, and Project Management. D. Submit draft for project management approval E. Approve Qualification Plan F. Release Qualification Plan to the ID/PRT

Worked With
Doug White

Researched requirements
Organized sources
Developed process structure
Organized Details and Specifics
Ongoing Process





Engineering Experiences

- Demonstration of mechanical Strong-link: saw the system in action
 - Tour of KCP Labs: multiple labs all one building
 - Tour of RF lab: Toured lab in 890 dealing with radio frequency technology
-
- NQT- 200 Preparing for Successful Product Acceptance
 - NQT-600 Mistake Proofing
 - ESD-200 Electrostatic Discharge





Lessons Learned

■ The internal workings of Sandia

- Business - cash flow – who controls the money
- Culture – bunch of engineers
- Production- not like commercial production
- Security – very high level, need to be followed

■ Quality Engineering

- Value added- the value in adding value
- Importance to production- no mistakes

■ Where the taxes go





Thank You!

I would like to thank everyone in Center 400 who had a hand in making this summer a fun and exciting time.

I would like to thank everyone who shared advice and ideas to help me in future endeavors. I look forward to seeing you all again.

