Sandia Summer

SAND2010-5607C

Summer Internship In Center 400: Surety Assessment & Engineering

Summer 2010

Shane Fullman

Summer Intern
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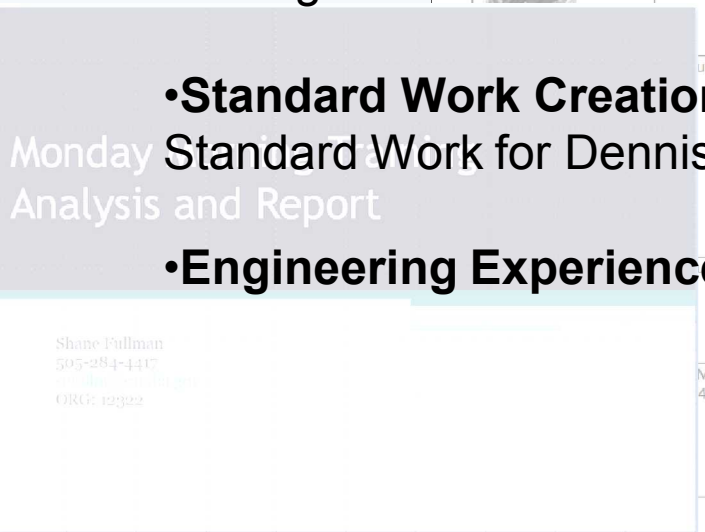
Manager: J Anthony Wingate

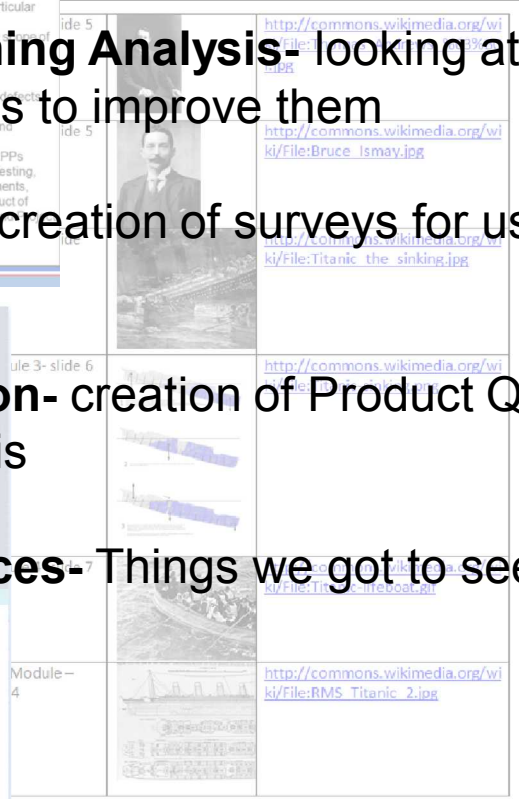
Shane Fullman

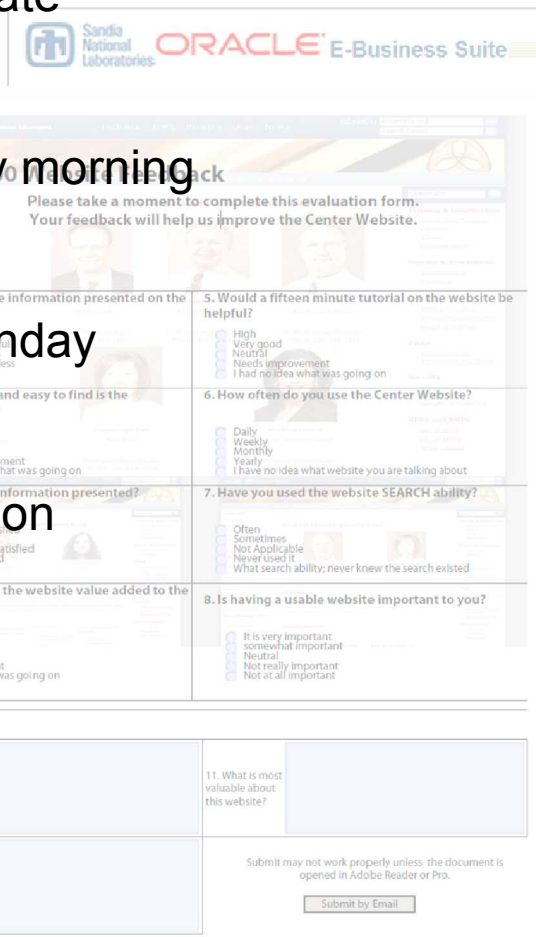
- Hometown: Phoenix, Arizona
- Attending Texas A&M University
- Graduation: 2012 Expected B.S. in Electrical Engineering

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 Standard Work for Dennis
- **Engineering Experiences-** Things we got to see and do







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.

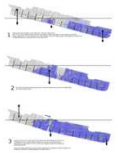
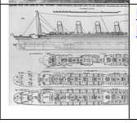
1. Any image that has an equivalent that is marked as public use is in the first table.
2. Images can be purchased are listed in the second table.
3. Images where the source is unknown or not actively for sale are in the final tables.

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	New picture to replace it	URL
			://commons.wikimedia.org/wi ile:RMS_Titanic_1.jpg
			://commons.wikimedia.org/wi ile:Titanic-NYT.jpg
			://commons.wikimedia.org/wi ile:The_Titanic_1.png
			://commons.wikimedia.org/wi ile:Lifeboats_leaving.jpg

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

Original Picture (currently in presentation)	Location in ppt: Stage or module #- page or slide #	New picture to replace it	URL
	Introduction-15	With text edited	http://www.army.mil/-images/2007/09/13/7904/army.mil-2007-09-13-115126.jpg clipart
	du 18		Clipart http://www.istockphoto.com/stock-illustration-5481947-solution-concept.php
	du 19		Clipart http://www.istockphoto.com/stock-photo-6125496-

	Module 2- slide 5		http://commons.wikimedia.org/wiki/File:Thomas_Andrews_%C3%BCl.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

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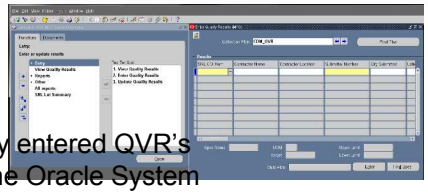
Data Control

Data searching and entry
Expected time to complete: three weeks
Actual time to complete: one week

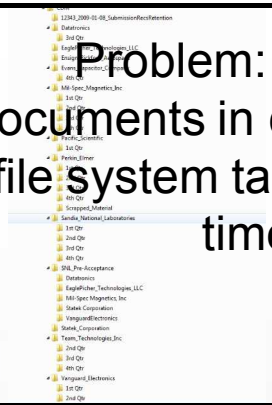
Sandia National Laboratories ORACLE E-Business Suite

Task: Enter data from QVRs into Oracle system

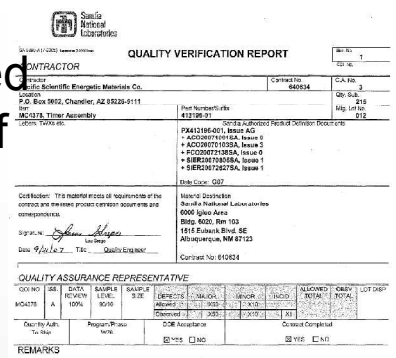


This was a one time deal, all newly entered QVR's will automatically be entered into the Oracle System
Worked with Errold Duroseau

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



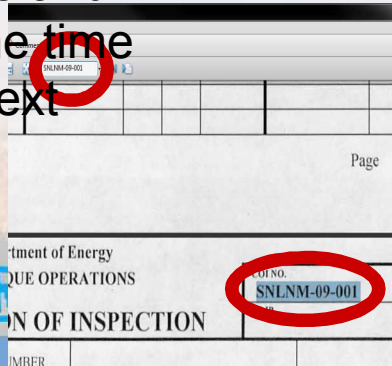
Only knew where to look for one of the three file levels



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

Results:

Organized Results into full report which contains:

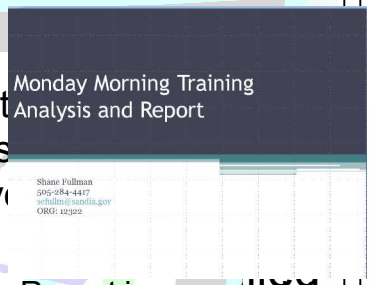
- Data
- Data Results
- Opinions
- Course opinions
- Suggested Topics
- Observed Issues
- Suggested Action

Compiled quantifiable results into charts

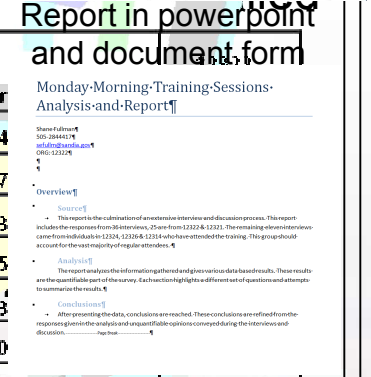
75% of people said training is useful in t

63% average training usefulness

Most liked course was GD&T with 13 positive



Report in powerpoint and document form



Question	Ever	
First training session (yrs)	1.54	
time in QE (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? (yes/no)(1/0) or (percentage would go)	0.45	0.52
Is the training worth the time spent? (yes/no)(1/0)	0.81	0.74

All information has been Recorded at:

https://sharepoint.sandia.gov/sites/workforceprojects/default.aspx

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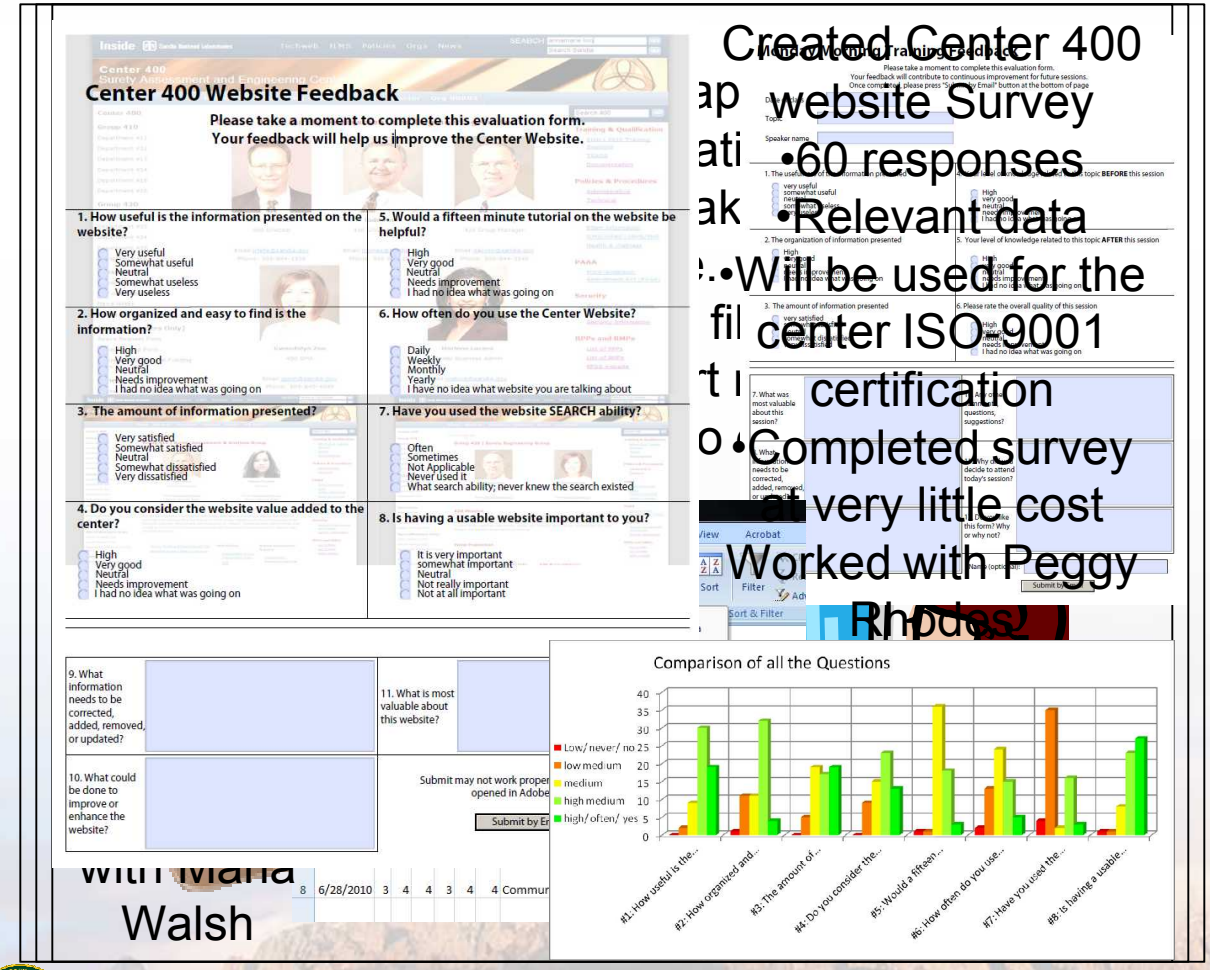
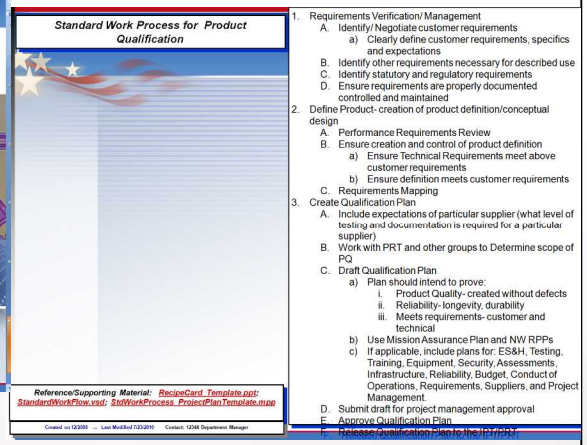
Electronic Surveys



- Created Center 400 website Survey
  - 60 responses
  - Relevant data
- Will be used for the center ISO 9001 certification
- Completed survey at very little cost
- Worked with Peggy Rhodes/ with Maria Walsh

Standard Work Creation

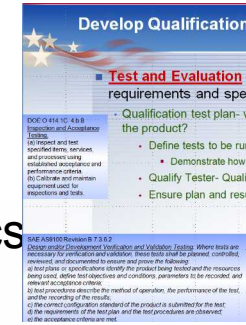
eate Standard Work: Product Qualification
n-depth look at how product qualification
should be done in Work for Others

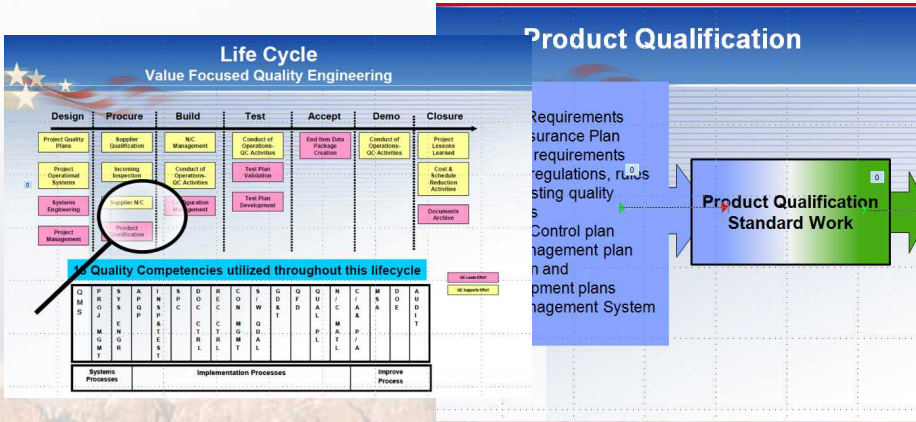


Worked With
Doug White

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.