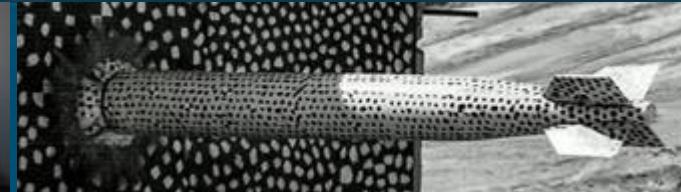
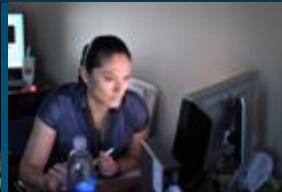


2020 SEERI Summer Presentation: Org 1673



PRESENTED BY

Shane Bramley



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.



- **About me/Hobbies**
- **School/Degree**
- **Organization/Manager/Mentor**
- **Projects Working On/Details of Project**

About Me/Hobbies



About me:

Born and raised in Albuquerque

Family is from the mid-west:

- Iowa
- Kansas
- Illinois

Hobbies:

- Coding (Various Languages)
 - Building VR (Oculus Rift S)
 - Android/IOS/PC
 - Various Applications
- Hanging out with friends
 - Working on cars
 - Drift Triking
 - Longboarding
 - Rock climbing

School and Degree

School: University Of New Mexico

Major: BS Computer Science

Minor: MIS

Shared Credit: MS Computer Science

Other Schooling:

- AAS in Computer Information Systems (Programming Concentration)
- Etc...



SCHOOL OF
ENGINEERING





Org: 1673

Manager:

Mark Kiefer



Mentor(s): (Formerly Allyson Kreft)

Rafael Aragon (Z-Machine ZQL) Brandon T. Klein (Z-Machine XR)



Z-Machine ZQL



Team Leads: Rafael Aragon and Trent Yocom

ZQL Website

- Languages Used (C#, Javascript, SQL, etc)
- ADOS (Formerly TFS)
- DevOps
- CI/CD Pipelines
 - Automated Build Process for applications
- Agile Development
 - Scrum
 - Kanban
- Database management
 - Shot Data
 - Diagnostics Data
 - People Data
- Z-HighBay IPad application (signalR)

Execution Timeline

Notes (Entered by Matthew Ray on July 10, 2020 at 13:06)

All, the new Z-Shot Timeline is posted below. This version reflects the most recent shot schedule update. The current version is showing all experiments through 7/17.

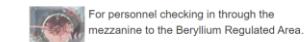
Last Published On: July 13, 2020 (06:58)

Current Checkins

Real-time tools:

Checkin Applications:

Topside Chamber



For personnel checking in through the mezzanine to the Beryllium Regulated Area.

Bottomside Chamber



For personnel checking in through the basement to the chamber's Beryllium Regulated Area.

MITL Tent



For personnel checking in through the basement to the chamber's Beryllium Regulated Area.

ESS (Oil Tank)



Reference Date 07/13/20

Evacuation Shot No Milestones

Milestones

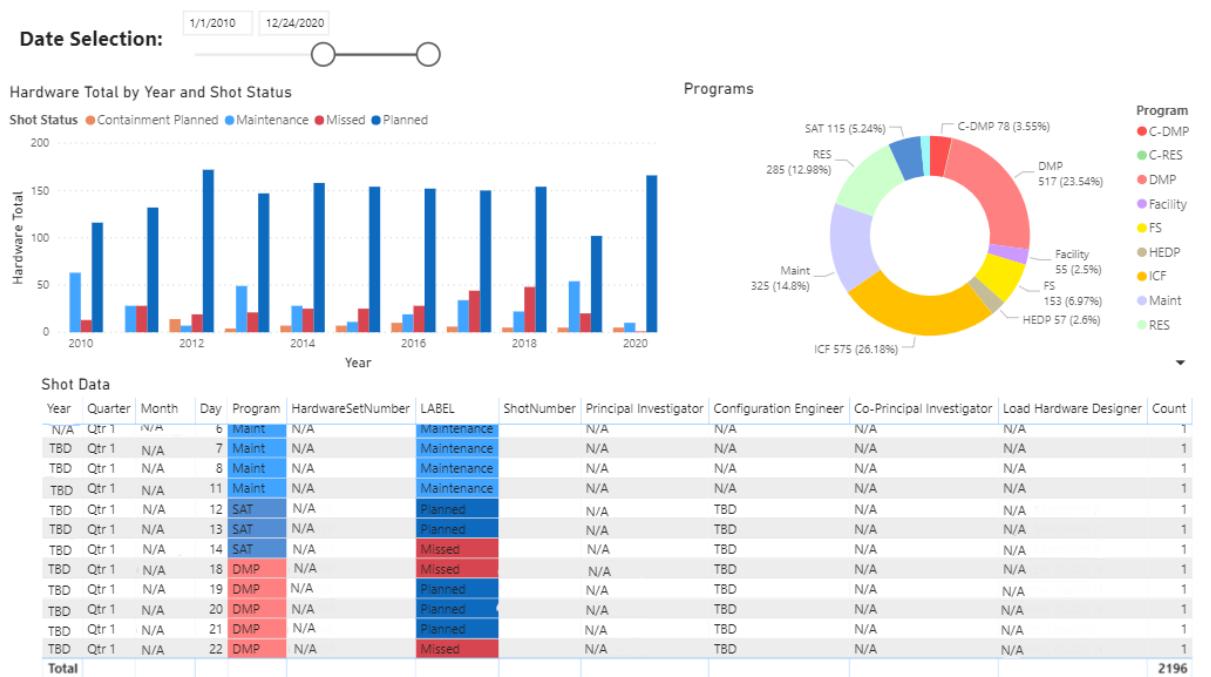
Name	Predicted Start Time	Actions
Unload MITLs	06:30	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Refurb MITLs	07:30	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Install MITLs	10:45	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Load/Diagnostics	11:30	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Lids/Vacuum	14:00	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Evacuation	15:45	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Downline	16:00	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Z-Machine Data Analytics (Power BI)



Team lead: Anhtrinh Lui

- Type of code used (DAX syntax)
- Format data into a more presentable location
- Power BI server
- SQL Stored Procedures
- Training on Power BI
 - Power BI reports
 - SSRS reports



XR@Z (Current Projects) Collaboration with XRSS (6000)



Team Leads: XR@Z Brandon T. Klein and XRSS Nadine Miner

Language's Used (C#, C++, SQL)

- HoloLens 1/HoloLens 2 development
- GUI (Menu System)
- Database's SQLite, UWP local DB
- Developing a generic XR management system
- Developing a generic XR sequential framework

Implementing various XR training applications

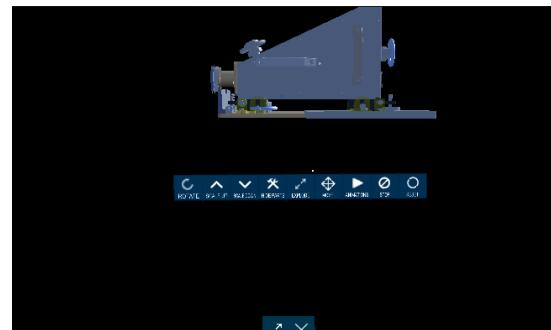
- Sequential: Gas Switch Assembly
- Exploration: CRITR
- Active: Target Recognition

Expanding work

- Automated CI/CD Pipelines
- Edge Computing
- Cloud Computing
 - Could increase in the polygon count to allow for larger cad models



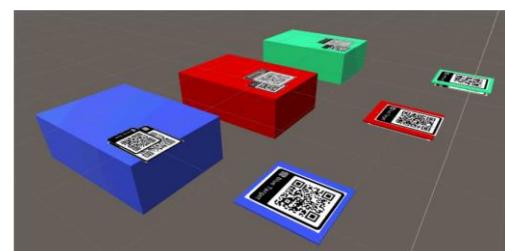
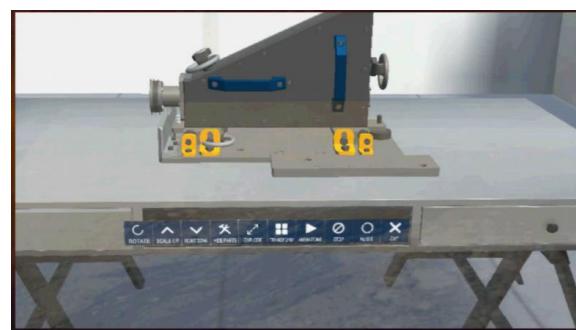
HoloLens I



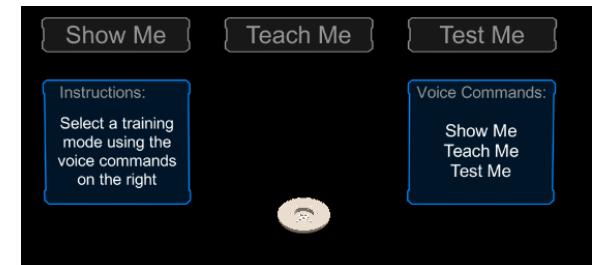
SAND2020-1598C



HoloLens II



SAND2020-1597C



SAND2019-14850C



Questions?