

Controls SW Group Meeting

January 18, 2023

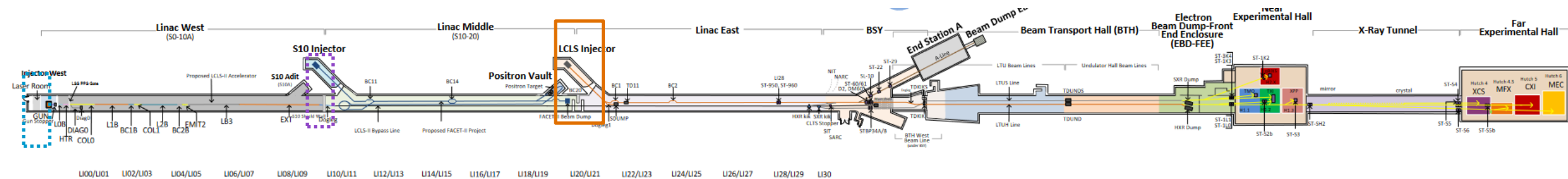
Agenda

1. State of the machine
2. Schedule & upcoming work
3. Intern updates

T. Summers

State of the Accelerators

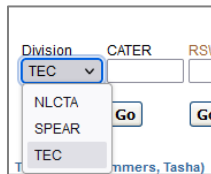
- **LCLS-SC**
 - Winter downtime continuing until next Wednesday (1/24)
 - AORs will be searched Monday, tunnel searched Tuesday
- **FACET**
 - Linac middle searched yesterday
 - RF recovery and checkout starts today, beam tomorrow
- **LCLS-Cu/NC**
 - Recovery and machine setup wrapping up, first users scheduled for today swing shift
- **SPEAR** has started running beam, accelerator physics setup shifts
- **UED** running user program



Upcoming downtime periods

Once all machines are back, we're in a predictable cadence until summer

- Next all-linac PAMM is end of January
 - JOBS DUE MONDAY (area manager review Tues)
PAMM planning meeting Thursday (1/25)
- Project to update and reboot all LinuxRT CPUs still in progress
 - SC being done this week, remaining ones on the PAMM
- Reminder that CATERS for SPEAR or UED/ASTA go into a separate division
 - As we recover all the accelerators, please take a moment to go through your subsystem statuses on LCLSHOME and FACETHOME
 - Continue destroying those purple boxes!!



Edit	Start Date ↓	End Date	Program	Machine Status	Description
797	04/23/2024	04/25/2024	All Accelerators	PAMM	4/23/2024 - 4/25/2024 PAMM
796	04/09/2024	04/11/2024	All Accelerators	PAMM	4/09/2024 - 4/11/2024 PAMM
795	03/26/2024	03/28/2024	All Accelerators	PAMM	3/26/2024 - 3/28/2024 PAMM
794	03/12/2024	03/14/2024	All Accelerators	PAMM	3/12/2024 - 3/14/2024 PAMM
793	02/27/2024	02/29/2024	All Accelerators	PAMM	2/27/2024 - 2/29/2024 PAMM
792	02/13/2024	02/15/2024	All Accelerators	PAMM	2/13/2024 - 2/15/2024 PAMM
791	01/30/2024	02/01/2024	All Accelerators	PAMM	1/30/2024 - 2/01/2024 PAMM
777	11/20/2023	01/26/2024	AOSD LCLS	Downtime	Nov-Jan Linac West Downtime

Typical PAMM schedule

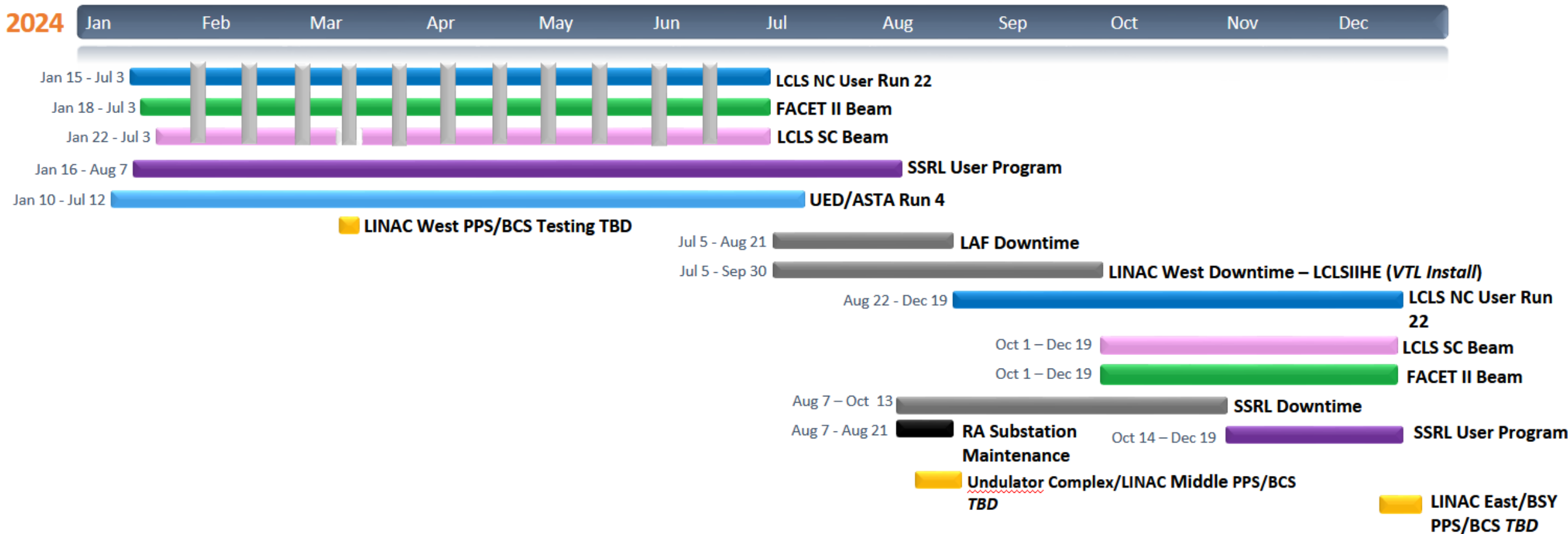
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Linac West							
S10 Inj							
Linac Mid							
S20 Inj							
Linac East							
BSY/BTHW							
BTH							
EBD-FEE							

Legend

- TBD
- Permitted Access
- Controlled Access
- Search
- Safety Cert.
- No Access
- POMM
- MD/Comm.
- Users

Big picture this year

2024



Special Topics

Intern Committee Announcements and New Interns

Project updates from Tiffany Tran and Valeria Pignataro

Internship Programs To Consider

- Year Round
 - AD/EED rec (casual employee)
- Fall
 - I2G UC Merced (competition)
- Winter/Spring 2024
 - UOP (6-month Co-Op)
 - I2G UC Merced (competition)
 - Al Ashley
- Summer 2024
 - SULI/CCI/VFP (Due 1/19/24)
 - LCLS (Alan Fry)
 - SAGE
 - STAR (Cal Poly)
 - STEM Core
 - Ohlone (Lydia)
 - ORISE/ORAU (Robotics)

UOP Schedule

Student works January through August



- Funding color code
- DOE Funded
- LCLS Funded
- AD/EED Funded
- SLAC
- Externally funded

Welcome Joshua Guiman!



- From South San Francisco, California
- Graduated from UC San Diego in 2023 with a Bachelor's degree in Mathematics-Computer Science, Minor in Cognitive Science
- Interned at the San Diego Supercomputer Center as a backend software developer
- Worked as a tutor for 2 years teaching Math, English, and Computer Science
- Big fan of Stanford's sports teams and their music venue Frost Amphitheatre
- Picking up new hobbies like Brazilian Jiu Jitsu and learning Japanese.
- **Found out about SLAC through classmates!**

Isaac Ali



- From Livermore, CA
- Senior Computer Engineering Undergraduate at University of the Pacific
- Works as a freelance Audio Engineer
- Interned at a robotics company in Summer 2023
- Avid drummer and guitarist
- Enjoys playing basketball
- Excited to get to know the team!

Welcome Valeria Pignataro !



- Originally from Venice, Italy
- Graduated from University of Padua in 2021 with a Bachelor's degree in Information Engineering
- Currently finishing my Master of Science in Mechatronic Engineering at Polytechnic University of Turin
- During my Master's, I joined a robotic student team and fell in love with robots!
- I'm here as an affiliate to do my Master thesis
- In my free time I enjoy touristy things :)
- Glad to be here !!

What I am doing here



- The star of the project is this robot
- The aim is the creation of a localization algorithm based on artificial markers
- Markers are detected by the cameras and an estimate of the robot position is made.
- This estimation is fused with position data coming from a LIDAR scanner
- The position is integrated inside a 3D map of the LCLS-II to let the robot know its own position in an absolute reference frame

A New welcome to Tiffany Tran!

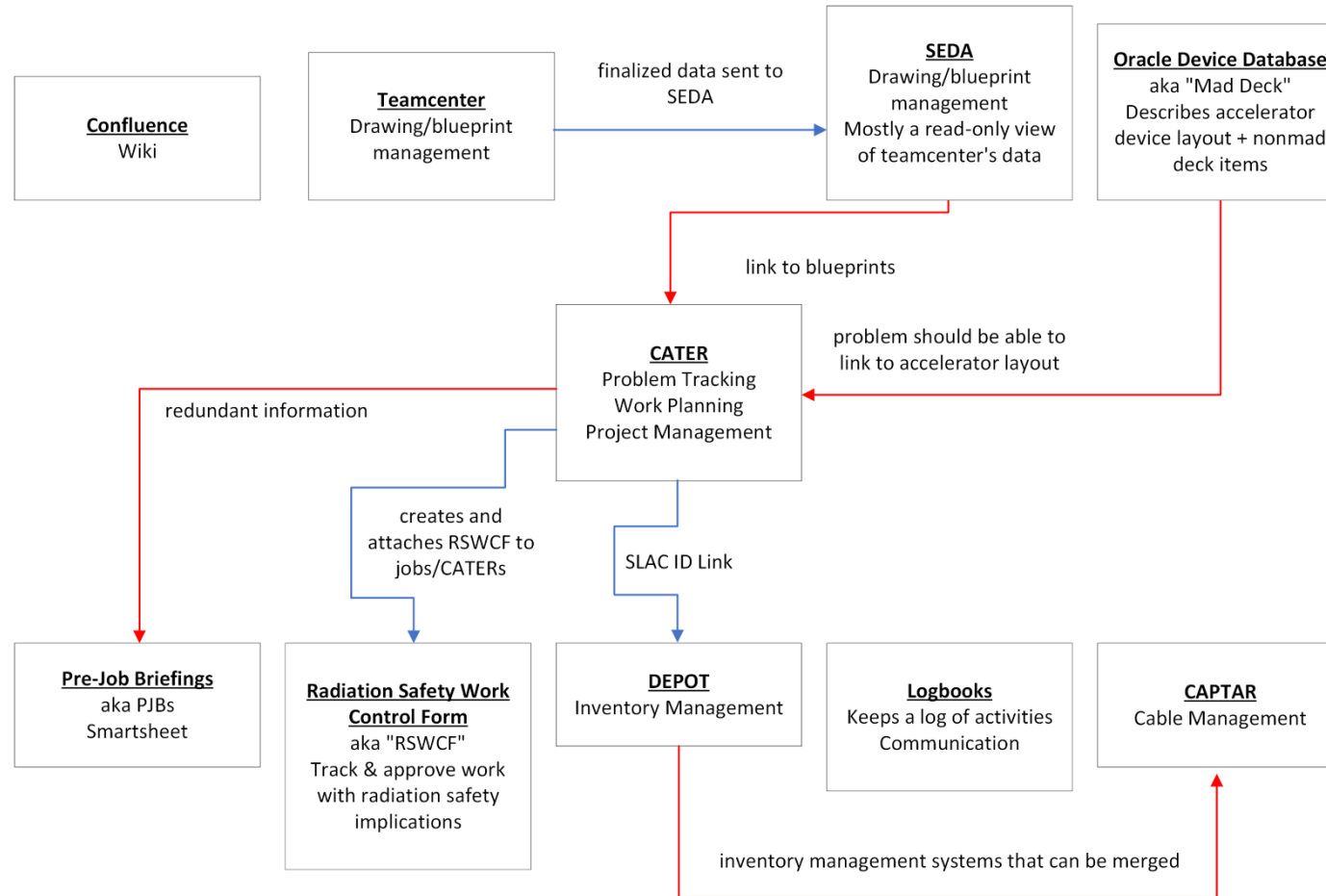


As of Tuesday, Tiffany is our newest full time employee!

Software Developer working for Mike Z.

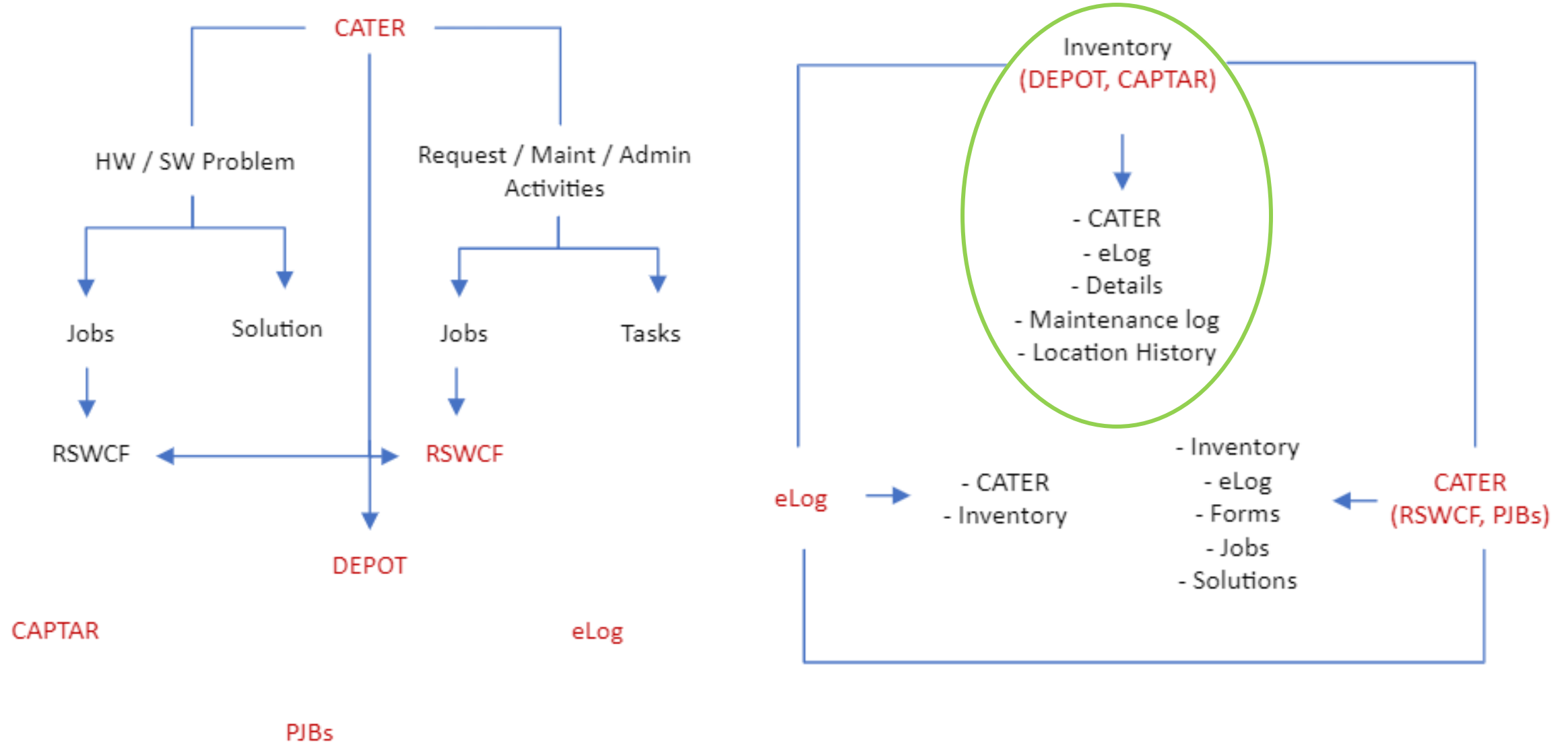
- Born and raised in San Jose, California
- Graduated from UCI in June 2023 with a Bachelor's degree in Informatics (emphasis in Human Computer Interactions) and minor in Management
- Worked as a Software Developer intern for capstone projects at Octane OC and Odyssey App
- Worked as a Recreation Leader for the City of San Jose since 2016
- Avid foodie and love road trips and traveling
- **Excited to be here :)**

UI Unification Project



- Team: Mike Zelazny, Claudio Bisegni, Tiffany Tran
- Streamline existing tools and workflows to enhance user experience and minimize duplicate data entry
- Focus:
 - DEPOT
 - CATER
 - Logbooks
- Proof of Concept by April 2024

Old Structure



Project Status Overview

Review systems

User Research

Design Mockups (*shown on next slides*)

Begin UI/Backend Development

Modernize the database

Integration of frontend with backend

UI + Database Refinements

User Testing



DEPOT --> Core Inventory System (CIS)

DEPOT Feedback Help Logout

Tran, Tiffany T. (TIFFANY) Depot PM Events EEIP Reports EEIP Inspectors

Home

Report (Advanced) (Select Advanced report for more search features)

Go 1. Primary Report Rows 100 Actions Create New DEPOT Item

Row text contains 'server'

Edit	ID	Model	Fcnl Rev	Serial	Po	Account	Makename	Nickname	Location	Last Date	Parent Id	Location Id	Nick Id	Makename Upper	Model Upper	Nickname Upper
	PC82659	PORTSERVER TS16		W95294335			Digi International	DIGI TERMINAL SERVER 16	KEK-ATF2	06/14/11		342342	11381	DIGI INTERNATIONAL	PORTSERVER TS16	DIGI TERMINAL SERVER 16
	PC82504	PORTSERVER TS16		W95294347			Digi International	DIGI TERMINAL SERVER 16	KEK-ATF2	06/14/11		342341	11381	DIGI INTERNATIONAL	PORTSERVER TS16	DIGI TERMINAL SERVER 16
	PCD07843	PortServer TS16 MEI		TMP6295			Digi International	DIGI TERMINAL SERVER 16 MEI	B062-24-21	05/11/11		363189	13729	DIGI INTERNATIONAL	PORTSERVER TS16 MEI	DIGI TERMINAL SERVER 16 MEI
	PCD07887	PortServer TS16 MEI		TMP6334			Digi International	DIGI TERMINAL SERVER 16 MEI	B062-140-45	05/10/11		363233	13729	DIGI INTERNATIONAL	PORTSERVER TS16 MEI	DIGI TERMINAL SERVER 16 MEI
	PC91101	R620		BLL0F21			Dell Computer Corp.	DELL 1U POWEREDGE R620 SERVER	B005-112	02/20/14		402880	16782	DELL COMPUTER CORP.	R620	DELL 1U POWEREDGE R620 SERVER
	18031448	EVR-230-PMC		K083065	155200	14555-A8001	Micro Research Finland	PMC-EVR-230	B005-403_Server Room	05/26/15	18031451	412231	10103	MICRO RESEARCH FINLAND	EVR-230-PMC	PMC-EVR-230
	PC92622	SLAC - R700LPB		C825MFD49N21463	156420	11667-A8001	SUPERMICRO	SUPERMICRO ZU SERVER - SHORT	B084/136	08/04/15	CPU-9094-PM04	413203	17723	SUPERMICRO	SLAC - R700LPB	SUPERMICRO ZU SERVER - SHORT
	PC92621	SLAC - R700LPB		C825MFE05N21117	156420	11667-A8001	SUPERMICRO	SUPERMICRO ZU SERVER - SHORT	B084/136	07/24/15	CPU-9094-PM03	413205	17723	SUPERMICRO	SLAC - R700LPB	SUPERMICRO ZU SERVER - SHORT
	PC73341	PORTSERVER TS16		V62329774	62988	9242119	Digi International	DIGI TERMINAL SERVER 16	B034-21040	05/21/14		405568	11381	DIGI INTERNATIONAL	PORTSERVER TS16	DIGI TERMINAL SERVER 16

SLAC NATIONAL ACCELERATOR LABORATORY Log Out

Home > Inventory + ADD NEW

Search: [] Sort by: Nickname

X '18061132' X '18061132' X '18061132'

1 - 9 of 9

	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002	Location Westpak for low pressure testing
	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002	Location Westpak for low pressure testing
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DEPOT --> Core Inventory System (CIS)

DEPOT

Tran, Tiffany T (TIFFANY) Feedback Help Logout

Home > Edit Depot Depot PM Events EEIP Reports EEIP Inspectors

Edit Depot Cancel/Return Create depot

* SLAC ID

* Nickname (If Nickname not found then please contact the DEPOT Admin)

Maker
Model
Revision
CUE Category
EEIP#

EEIP Insp Date
EEIP Inspector
* Serial

Cater Shop

Subsystem

Drawing

Created By
Created Date
Modified By
Modified Date

CUE (Critical Utilization Equipment)

Risks Fire Personnel Mission Mission Non-CUE

Resp Org
Resp Admin

Firmware and MAC Addresses Create Firmware or MAC Address

no data found







Additional Fields

SLAC NATIONAL ACCELERATOR LABORATORY Log Out

Home > Inventory

Search Sort by: Nickname

X '1806132' X '1806132' X '1806132'

	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002
	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002
	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002
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	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002
	ID: 18049393 ATCA CRATE COMTEL 7-SLOT Serial: 0818GV-0002

Add Item ✕

SLAC ID *

Serial *

Nickname *

Maker
Stanford Linear Accelerator Center

Model
DB

Revision
0

CUE Category
null

Check to add another item.

Submit Cancel

Current Progress + Next Steps

The top screenshot displays the 'Admin Dashboard' for SLAC National Accelerator Laboratory. It features a sidebar with navigation options: Home, Inventory, CATER, eLog, Admin, and Settings. The main content area includes a '+ New Class' button and three summary cards: 'Buildings' (1), 'Element' (0), and 'Items' (0). Below these are three tables: 'Domains', 'Classes', and 'Elements'.

Name	ID
inventory-001	65a859ec3dec124686804bdc

Name	ID
building	65a859ec3dec124686804bd3
experimental-facility	65a859ec3dec124686804bd4
floor	65a859ec3dec124686804bd5
office	65a859ec3dec124686804bd6
laboratory	65a859ec3dec124686804bd7
server-room	65a859ec3dec124686804bd8
rack	65a859ec3dec124686804bd9

Name	ID
building-34	65a859ec3dec124686804bdd
floor-1	65a859ec3dec124686804bde

The bottom screenshot shows the 'Inventory' page. It includes a search bar and a list of items. The first item is 'Building 34' with ID: 65a859ec3dec124686804bdd and Class ID: . The second item is 'Floor 1' with ID: 65a859ec3dec124686804bde and Class ID: . A 'Load More' button is visible below the list. On the right side, there is a 'Create Item' form with fields for Parent (Select a parent), SLAC ID, Serial, and Charge Code, and a 'Create Item' button.

Finish up CIS

- Shift focus from functionality to UI enhancements

Start integrating & revamping CATER!

Future:

- Incorporate eLogs
- Present a working application that interconnects depot, cater, & eLogs together

LinuxRT/CentOS Upgrade Status

An Le, Jerry Katzung, Mike Puckett

17 Jan 2024

Why/What

- SLAC IT reported a number of security vulnerabilities that needed to be addressed in our LinuxRT and CentOS buildroot images
- Summary of changes
 - telnetd has been disabled
 - One cannot directly telnet onto a CPU anymore
 - root is password-protected
 - same password as terminal server login
 - reboot no longer hangs on Advantech CPUs
 - /etc/SLAC_properties exists
 - Contains HAVE_ROOT_PASSWORD=1
 - The following accounts/groups are pre-populated:
 - acctf/acctest -> 11846/2459
 - flaci/facet -> 11121/2376
 - laci/lcls -> 8412/2211
 - spear/qb -> 7753/1080

Status

- First spin worked in LCLS, but bugs were discovered on FACET and TestFac, which required additional spins
- The current 4th spin is working in all facilities, but isn't currently running in all CPUs
- If any of th
- Rather than the rest for

Prod CPU status

d scheduled

