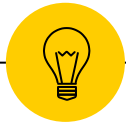


End of semester **co-op** presentation



Aswin Balasubramaniam

Hello!

I am Aswin

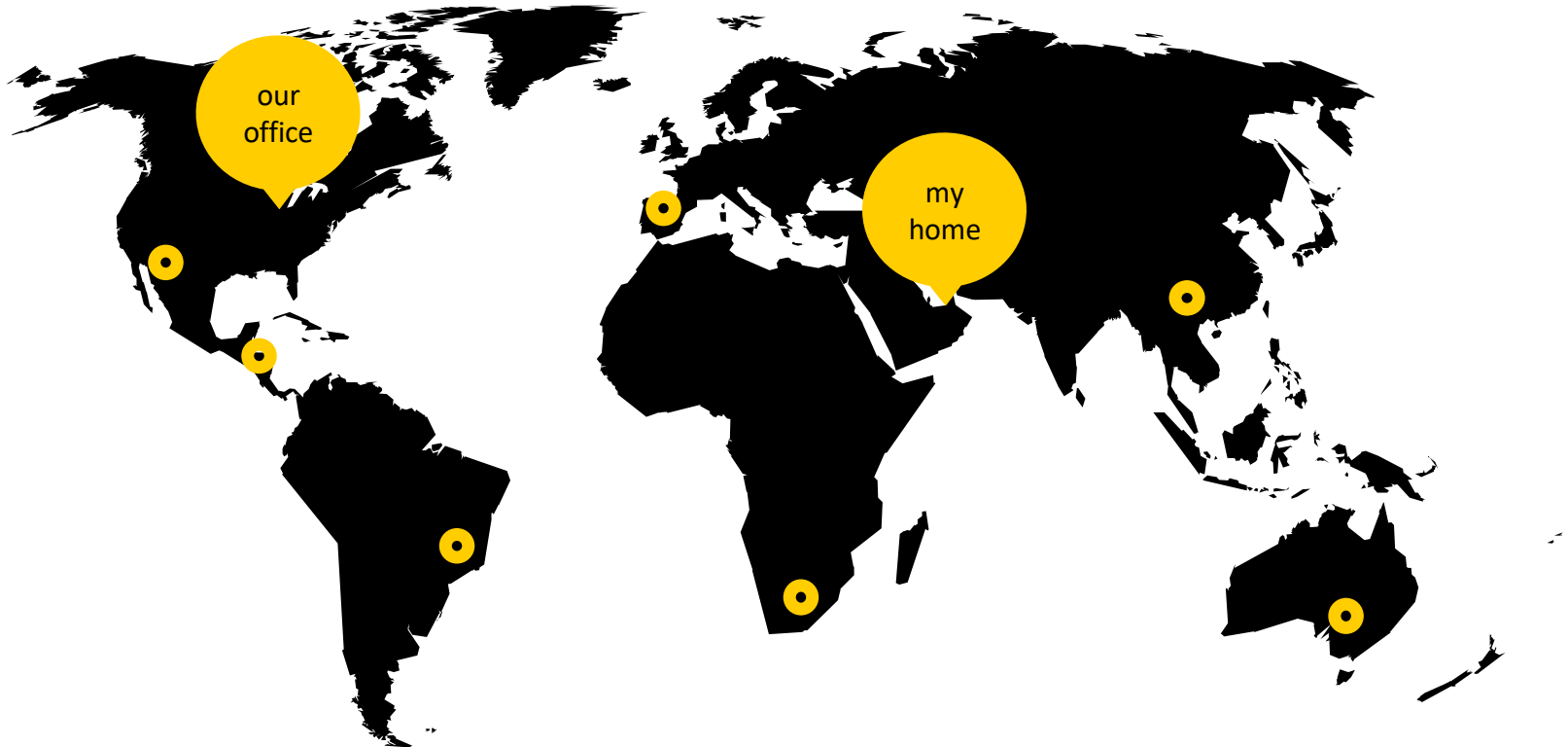
Balasubramaniam

Junior at University of Cincinnati.

Major in Electrical Engineering Technology

Minor in Economics.

First rotation with MEAA.



our
office

my
home



1

AutoCAD Drawings

For replacement parts

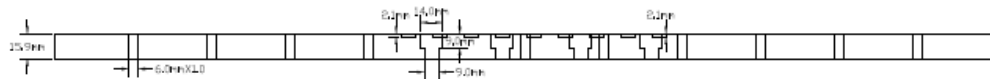
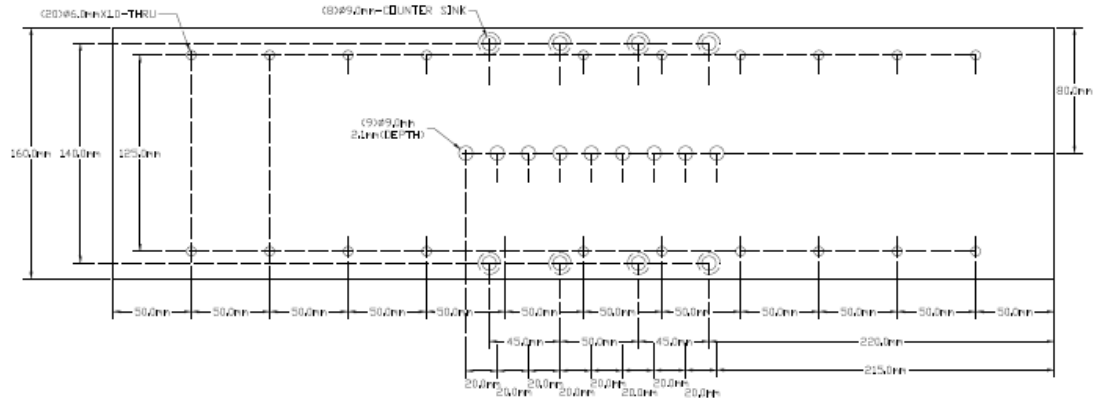


AutoCAD drawings

- CAD drawings of replacement parts for machines on AW01 and AW02. (7 in total)
- Designed a title block for CAD drawings.



TOP VIEW



SIDE VIEW

PART DESCRIPTION

NUMBER:

QUANTITY: 2

MATERIAL: ALUMINIUM


REV	DATE	BY	CHKD

PROJECT	DATE	REV	BY	CHKD





AutoCAD drawings

 MITSUBISHI ELECTRIC AUTOMOTIVE AMERICA 4773 Bethany Rd Mason OH 45040	PROJECT NAME: PROJECT_NAME_1					
	PROJECT_NAME_2					
	PROJECT DESCRIPTION: PROJECT_DESC_1					
	PROJECT_DESC_2					
	PROJECT NO.:	SHEET:	DRAWN BY:	DATE:	APPROVED BY:	DATE:
PROJECT_NO	SHEETS	DRAWN_BY	DATE	APPROVED_BY	DATE_APP	SCALE

REV NO.	DATE	NAME	COMMENTS
REV_1	DATE_1	NAME_COMMENT_1	
REV_2	DATE_2	NAME_COMMENT_2	
REV_3	DATE_3	NAME_COMMENT_3	
REV_4	DATE_4	NAME_COMMENT_4	
REV_5	DATE_5	NAME_COMMENT_5	

PART DESCRIPTION

NUMBER: PART_NUMBER

QUANTITY: QUANTITY

MATERIAL: MATERIAL

2

Preventive Maintenance Board

For AV01 and AF01



Preventive maintenance board

- Built a preventive maintenance board for AV04 and AF04 lines.
- Printed out checksheets for Line 4, and labelled all the cards on the shelf.



Preventive maintenance board



3

GOT design update

Updated the GOT design for riser lathe on AW01



GOT design update

- Updated the GOT design interfaced for riser lather on AW01.
- Made changes to the design to suit the preferences of the operator/technician who use the GOT on a regular basis.



TEACHING MODE

MODEL: **ABCD**

UNLOADER

CURRENT POS : 123456

JOG
SPEED
10

JOG
MODE

UP

DOWN

QD 75 ERROR NO. 123456

**TROUBLE
RESET**



IP ADDRESS - 192.168.3.39

POSITION

SPEED

POS 1:
HOME

123456

123456

**TEACH
POS 1**

POS 2:
CRADLE

123456

123456

**TEACH
POS 2**

POS 3:
SPINDLE

123456

123456

**TEACH
POS 3**

BACK



AUTO MODE

MODEL: **ABCD**

AUTO RUN

OD
CURRENT POS
10

345.6^{SEC}


TOP CUT
CURRENT POS
10

OD
ADJUSTMENT



1 PRESS = 0.05MM

CUT SPEED



123456

TOP CUT
ADJUSTMENT



1 PRESS = 0.05MM

CURRENT POSITION

TRANSFER	LOADER	UNLOADER
10	10	10

**QD75
MONITOR**



IP ADDRESS - 192.168.3.39

MANUAL MENU

MODEL: ABCD

UNLOADER

CURRENT POS : 123456

JOG
SPEED
10

JOG
MODE



UNLOADER POSITIONING

HOME POSN [P1]

CRADLE [P2]

SPINDLE [P3]

QD 75 ERROR NO. 123456

TROUBLE
RESET



IP ADDRESS - 192.168.3.39

MANUAL
MENU



4

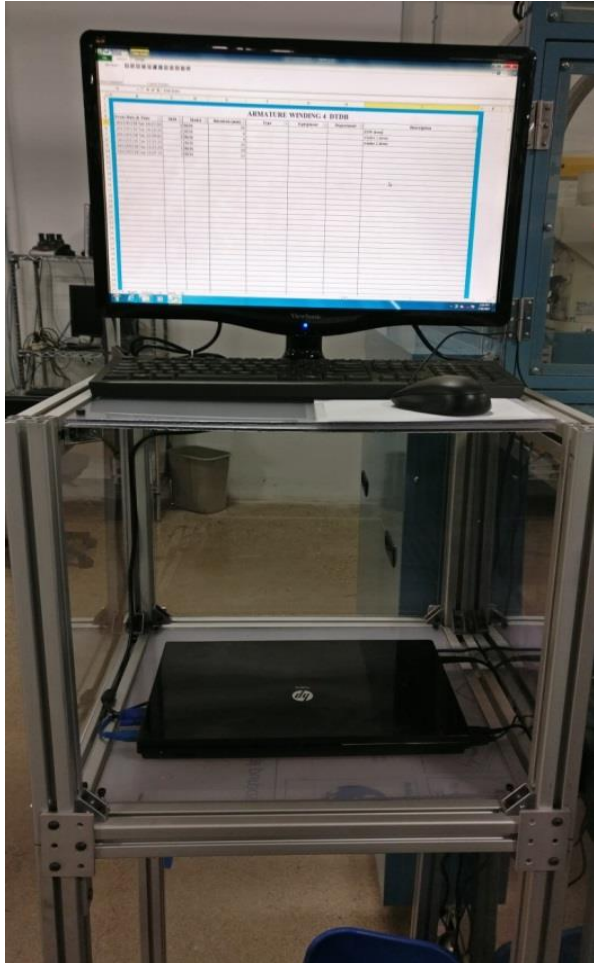
Laptop/monitor stand

Assembled a stand for a laptop/monitor on AW04



Laptop/monitor stand

- Assembled a stand for the laptop and monitor screen that aids the operator on AW04 to track downtime.
- The stand was assembled using 80/20 t-slots and plelxiclas.



5

Oil dispenser

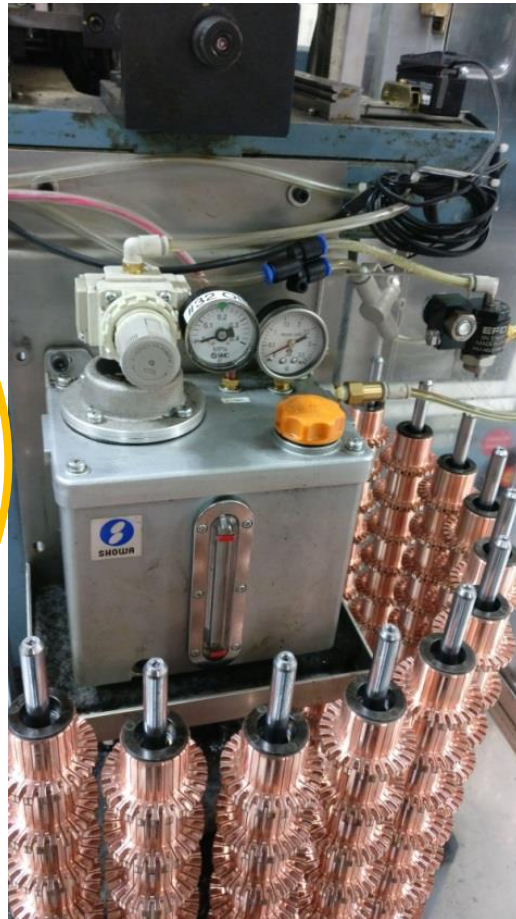
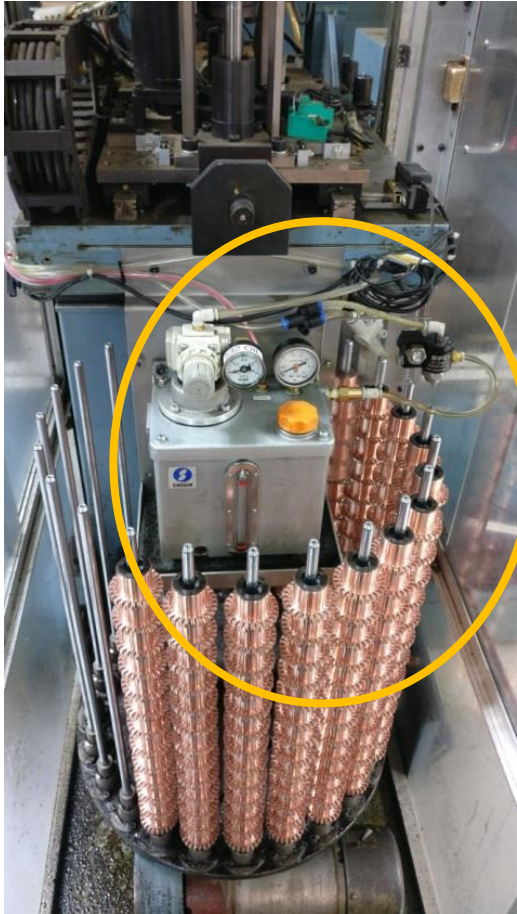
Oil dispenser for commutator press-in on AW01 and AW02



Oil dispenser

- Built an oil dispensing machine for commutator press-in machine on AW01 and AW02.
- Programmed the PLC to dispense oil at certain intervals, or as per the needs of the operator for that line.





6

Monthly cycle time

Recorded machine cycle times on AW01

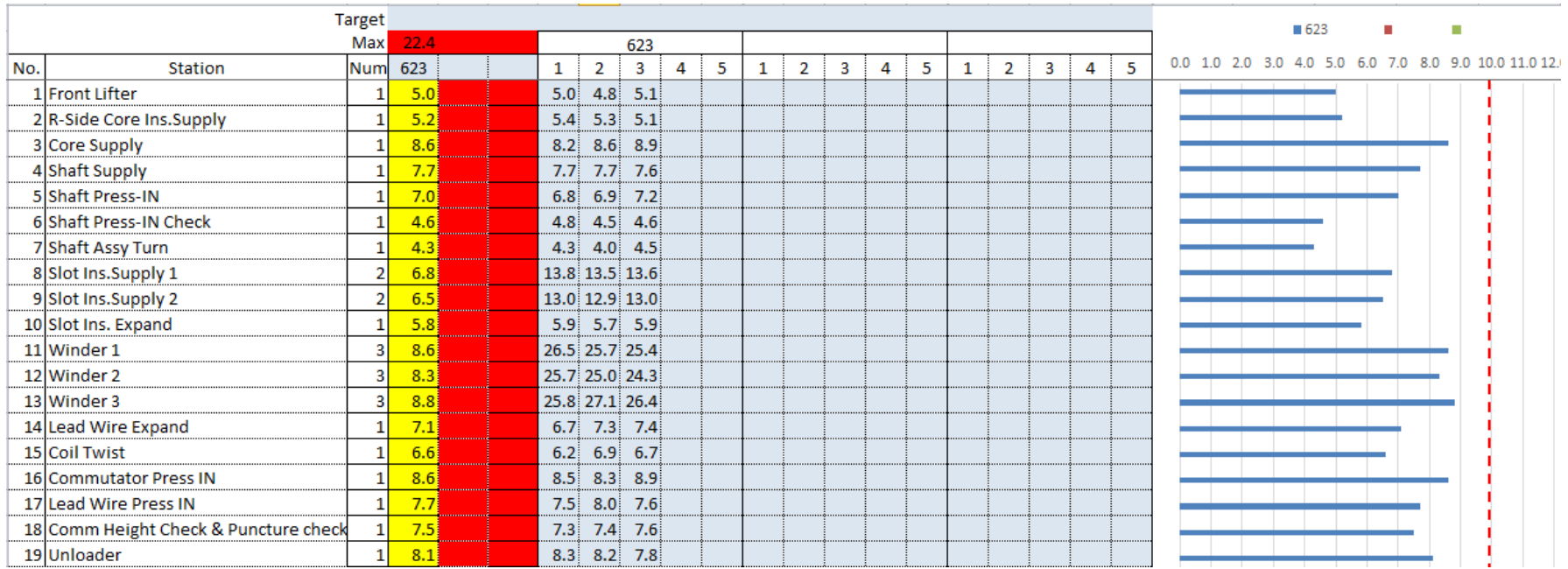


Monthly cycle time

- Recorded cycle times for machines on AW01.
- These numbers help to keep the engineers and operator informed about the efficiency of production, beginning of every month.



Monthly cycle time



7

Purchase orders



Purchase orders

- Filled out purchase orders, to buy the necessary materials for projects.



Purchase orders



PURCHASE REQUIREMENT



For a greener tomorrow

Ship To: 4773 Bethany Rd. Mason, Ohio 45040 TEL:(513)398-2220
FAX:(513)398-1143

Bill To: 4773 Bethany Rd. Mason, Ohio 45040 TEL:(513)398-2220
FAX:(513)398-1143

Date: 7/25/2017

v3.0

NOTICE: THIS DOCUMENT IS NOT A PURCHASE ORDER

VENDOR			PURCHASE ORDER DETAIL					SHIPPING TERMS	
Name: K & K PRECISION, INC.			PO No: _____					Pre-paid & Add	
No: 22510		Contact: _____	Ship To Attn Of: Mamadou Aw					Collect	
Phone: 513 336-0032		Fax: 513 336-0035	NOTICE: All Packing List MUST include the MEAA "PO No." and "Ship To Attn Of" name					3PL	
Email: _____			Remarks: _____						
Return Confirmation To: _____			(Buyer)					(E-mail Address)	
ITEM NO.	APVD CHEM	PART# ACCOUNT#	DESCRIPTION	DELIVERY DATE	QUANTITY	UOM	UNIT PRICE	AMOUNT	
1		JK8704095F	Tubing		2	PC	\$107.00	\$214.0000	
2						PC		\$0.0000	
3								\$0.0000	
4								\$0.0000	
5								\$0.0000	
6								\$0.0000	
7								\$0.0000	
8								\$0.0000	
9								\$0.0000	
NOTE: 1. Vendor quote must be attached for: a) any non-standard catalog item b) Any item where the UNIT PRICE ≥ \$500.00							TOTAL AMOUNT	\$214.0000	

8

Summer shutdown

The week that never ended



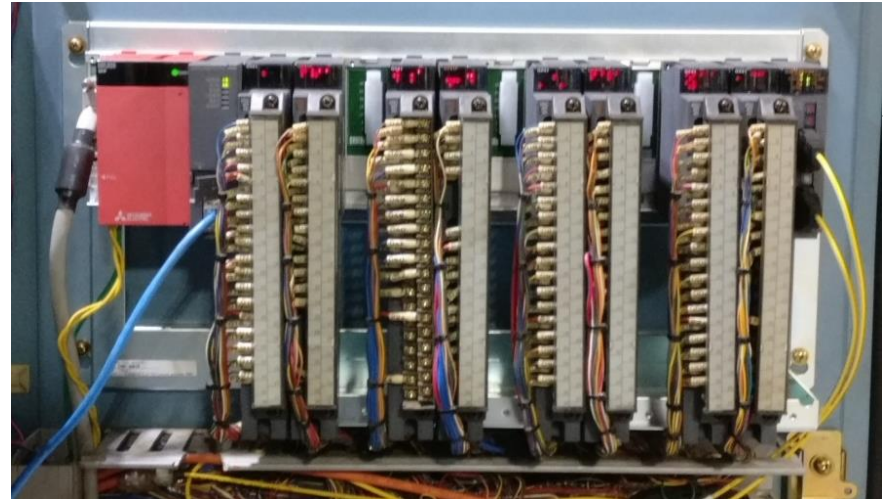
Summer shutdown

- Assisted Mamadou Aw with assembly, and wiring PLC cabinets.
- Helped with upgrading PLC systems for unloader on line AW02, from A to Q series.
- Helped with upgrading the servos and actuators for riser lather on line AW01.

BEFORE



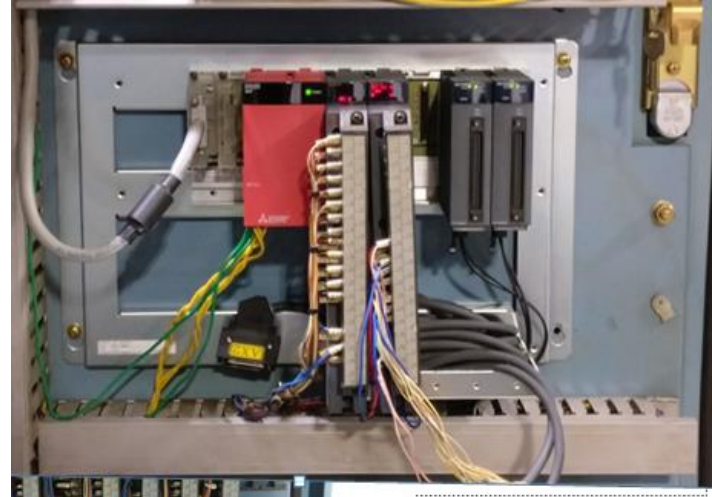
AFTER



BEFORE



AFTER





W

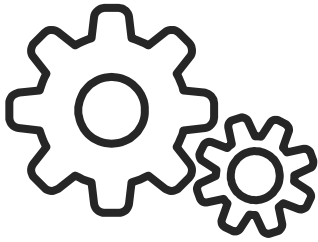


9

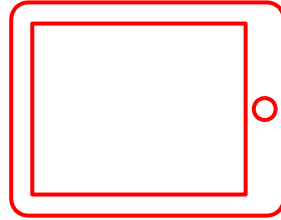
The one other than projects



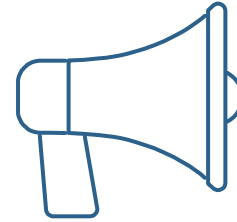
The one other than projects



Troubleshooting
armature winding
machines



Updating PLC and
GOT programs



Interaction with
vendors (K&K
Precision)



And Finally

Couldn't have done any of these without the guidance and help of these two people.



PS: This is what they do all day, while they give me all the work there is!
PPS: Just kidding! Mamadou made me write that!



Thanks!

*Any **questions** ?*