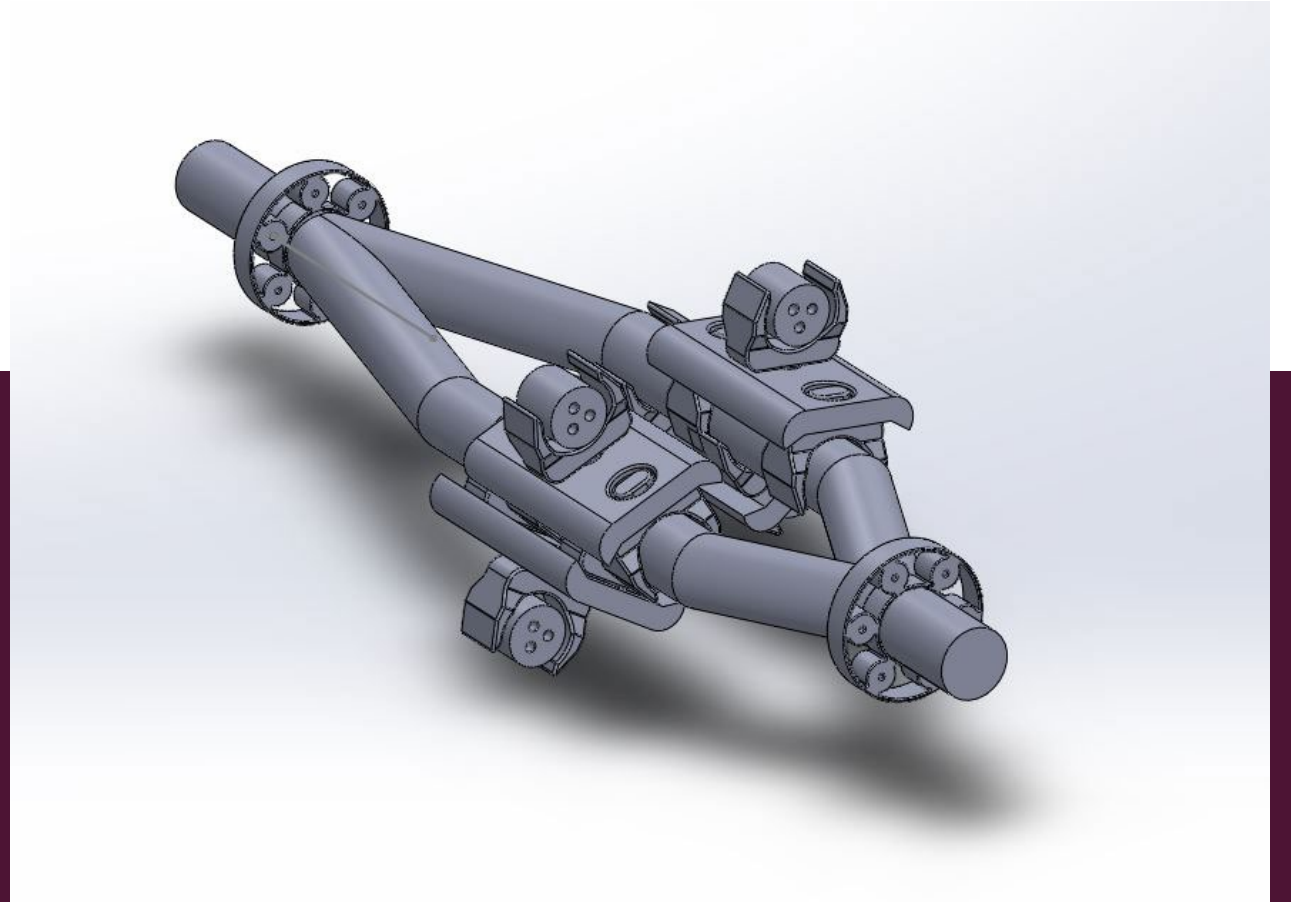


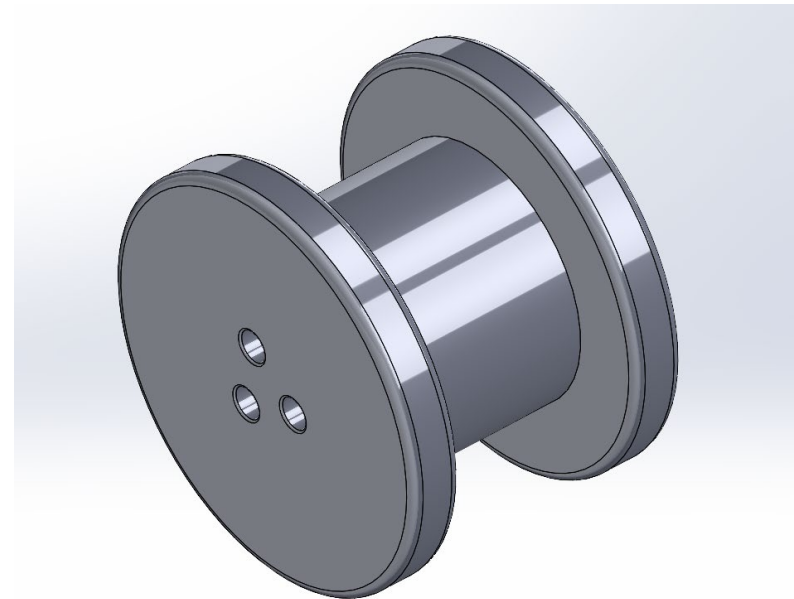
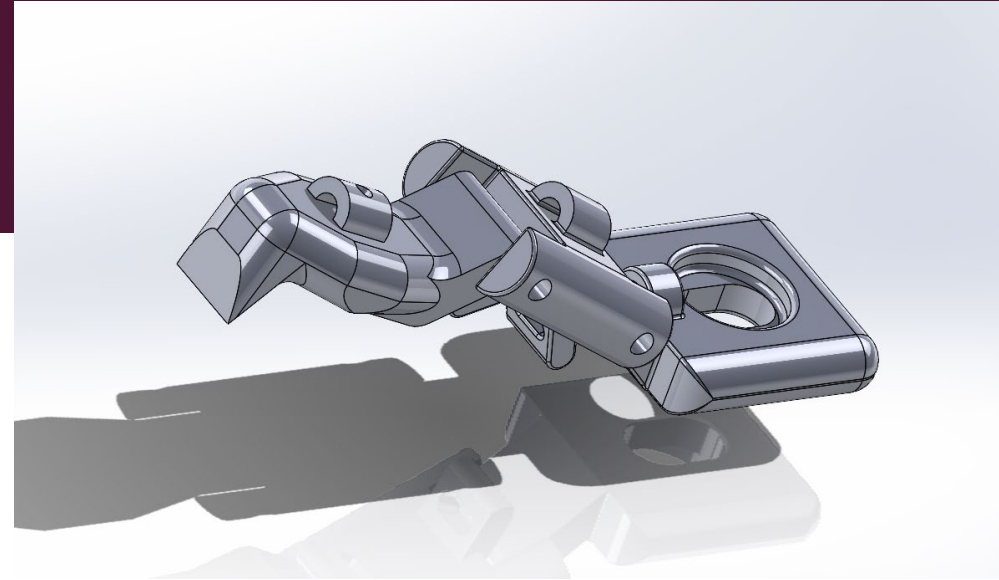
TEAM CAVATAPPI BUILD UPDATE II

JAMES BENNETT, ANN LESTER, RYN SHUSTER



DESIGN EFFORTS

- Redesigned Manifolds to prevent slipping in assembly
- Smaller muscle monofilament
 - Larger monofilament prevented flow
- Designed end effector fingers with claw-like end to help with gripping smaller objects
- “Trumpet” actuation will be modelled for print by 03/04
- Estimated Design Efforts Completion: 95 %



PURCHASING PLAN

- Luer Connections purchased (arrived 02/25)
- Hydraulic Tubing purchased (arrived 02/25)
- M3 Set Screws no longer necessary
 - Were necessary for clamp redesign
 - Clamp redesign was deemed unnecessary
- Qosina Syringes were on hold, but on the way
 - Estimated to arrive in roughly a week
 - Currently have enough syringes for tests
- Estimated Purchasing Completion: 100%

Item	Cost	Supplier	On Hand	Order By	Part No.	Notes
M3 Bolts	In Lab	Copper State	Yes			
M3 Set Screws	\$ 8.77	Copper State	No	8-Feb		No Longer Necessary
M3 Nuts	In Lab	Copper State	Yes			
Sous Vide	Team Member Owned	Anova	Yes			
Vacuum Sealer	Team Member Owned	Guttale	Yes			
Vacuum Bags	Team Member Owned	Guttale	Yes			
3ML Syringes	\$ 3.82	Qosina	Yes		C3303	Price Assumes 20ct
1ML Syringes	\$ 10.47	Qosina	Yes		C3301	Price Assumes 20ct
Injection Syringe	In Lab	Amazon	Yes			
Male Luer Connector	\$ 7.14	Qosina	Yes	8-Feb	11590	Price Assumes 30ct
Female Luer Connector	\$ 12.45	Qosina	Yes	8-Feb	11765	Price Assumes 30ct
Tygon	In Lab	St. Goblain	Yes			3/32" OD 1/32" ID
Hydraulic Tubing	\$ 12.03	Amazon	Yes	7-Feb		
Monofilament	In Lab	Trilene	Yes			20Lb Test .018" OD
Mandrel Material	In Lab		Yes			16ga Wire
Mineral Oil	In Lab		Yes			
Print Resin	Donated		Yes			
Print Filament	Donated		Yes			
Thread	\$ 1.35	Michaels	Yes			
Epoxy	\$ 6.17	Walmart	Yes			
UV Set Glue	\$ 18.30	Amazon	Yes			
UV Flashlight	Included with Glue	Amazon	Yes			
Eyelet Connector	In Lab		Yes			0.25" ID
T_Slot Rail	1.96/in	Home Depot	Yes			400 & 600
T_Slot Bracket	0.89/item	Home Depot	Yes			401 & 600

MANUFACTURING PLAN

- Muscles are ongoing (done before 03/11)
 - Number cut down from 100 to 20 for final design
- Prints are ongoing (done before 03/11)
 - Everything left that is printable is modelled/ will be modelled by 03/04
 - Most components are modeled, need to be adjusted for full scale, general tolerances and design methodology are complete.
- Estimated Manufacturing Plan Completion: 60 %
 - Will be at 70% by 03/04

Item	Material	Method	On Hand	Make By	Quantity
Tower_Spool	Resin	3D Print	Yes		1
Spool	Resin	3D Print	Yes		1
Tower_Mandrel	Resin	3D Print	Yes		5
Clamp	Onyx	3D Print	Yes		6
Clamp Jaw	Onyx	3D Print	Yes		6
Clamp (Machined)	Aluminum	Turn/Mill	Yes		10
Manifold Slice (Test)	Onyx	3D Print	Yes		9
Manifold (Test)	Onyx	3D Print	Yes		2
Arm	Onyx	3D Print	No	11-Mar	2
Wrist	Onyx	3D Print	No	11-Mar	2
Elbow	Onyx	3D Print	No	11-Mar	2
Gimble	Onyx	3D Print	No	11-Mar	2
Control Housing	Onyx	3D Print	No	11-Mar	2
Manifold Slice (Prod)	Onyx	3D Print	Yes		32
Manifold (Prod)	Onyx	3D Print	Yes		8
Manifold Mounting Plate	Onyx	3D Print	Yes	11-Mar	8
Muscles	Onyx	3D Print	No	11-Mar	20
End Effector	Onyx	3D Print	No	11-Mar	2

GANTT CHART UPDATE

