

*Portfolio*

# **Top Class Mechanical Engineer**

*Kim,Dongho*

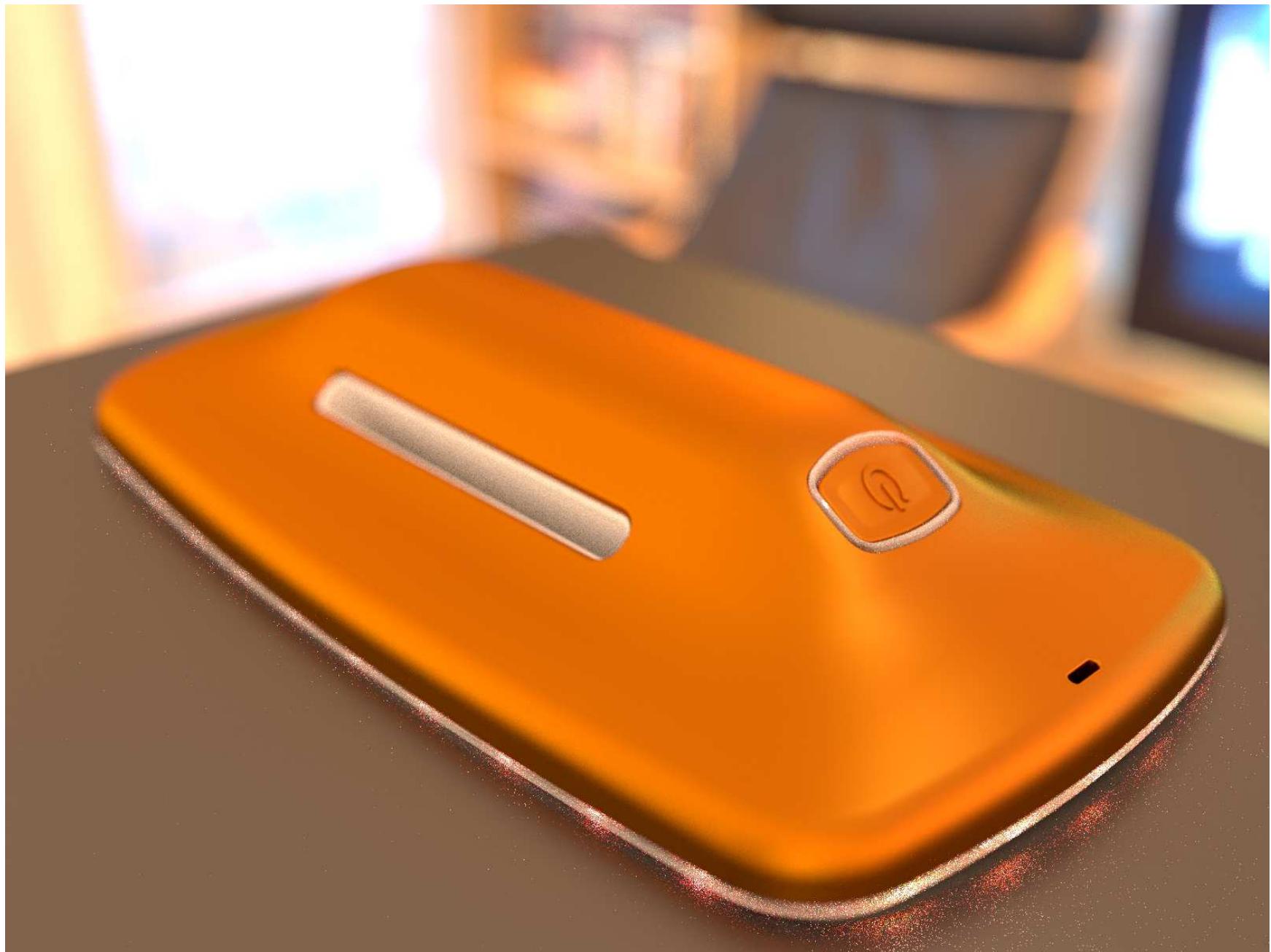
*dymaxion.kim@gmail.com*



# Healthcare

2017~2018

- Aalok



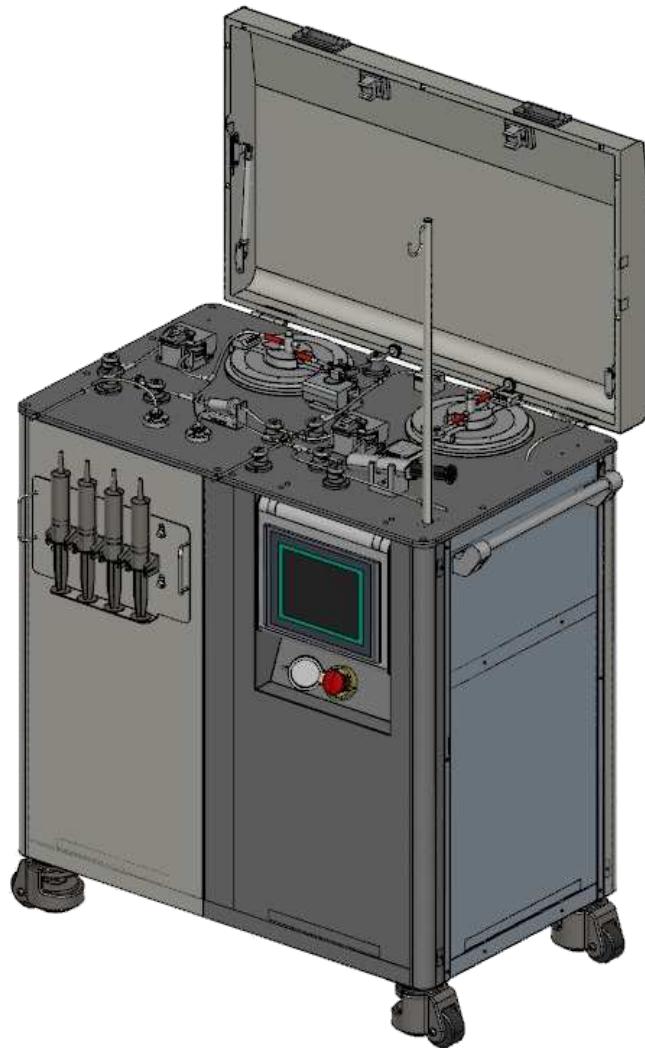
- LLT-1



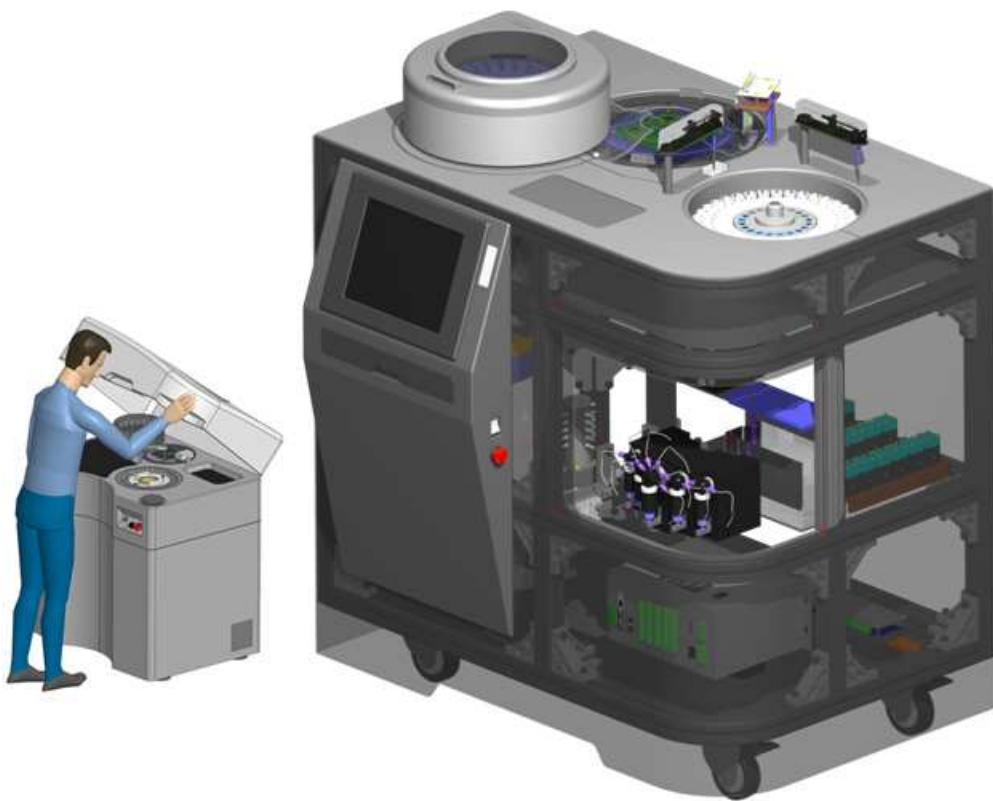
# **Medical Devices**

*2017~2018*

- **SCELDIS**



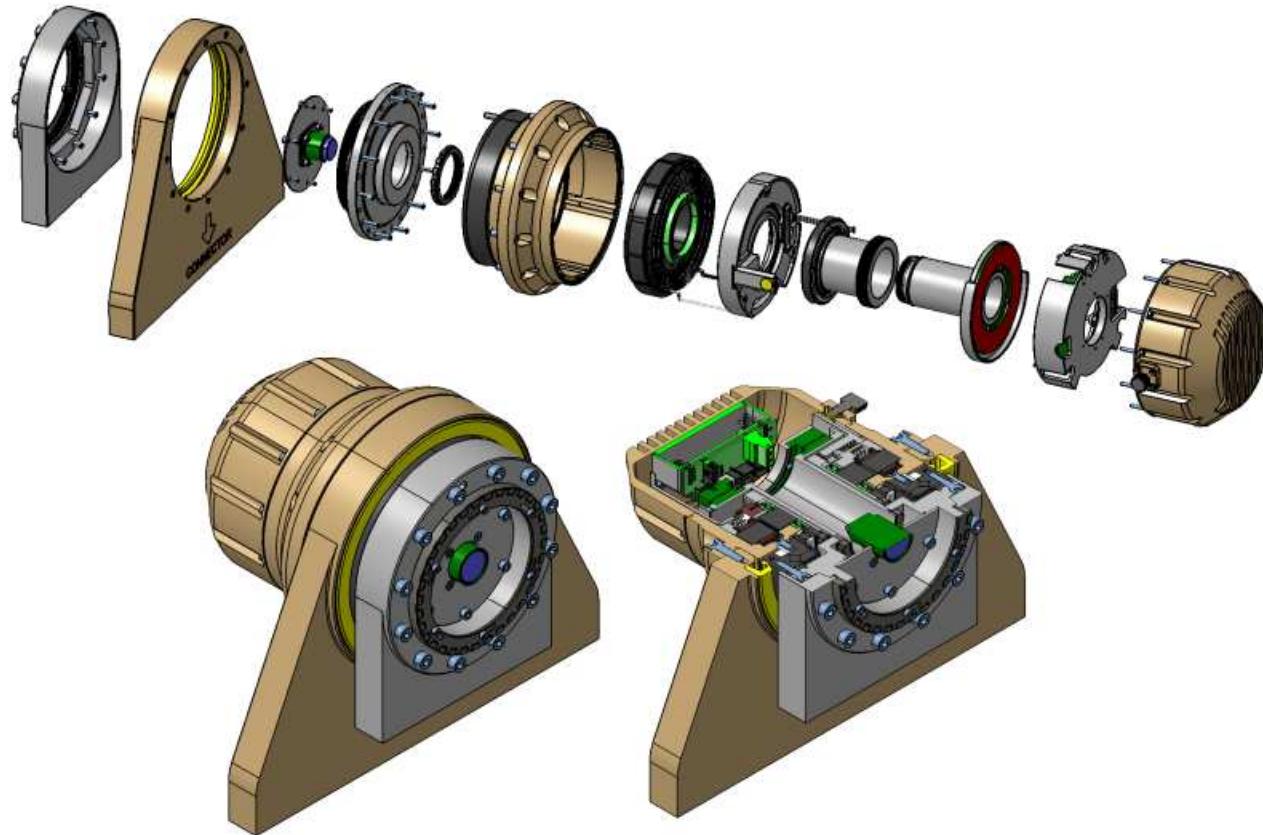
- BIO



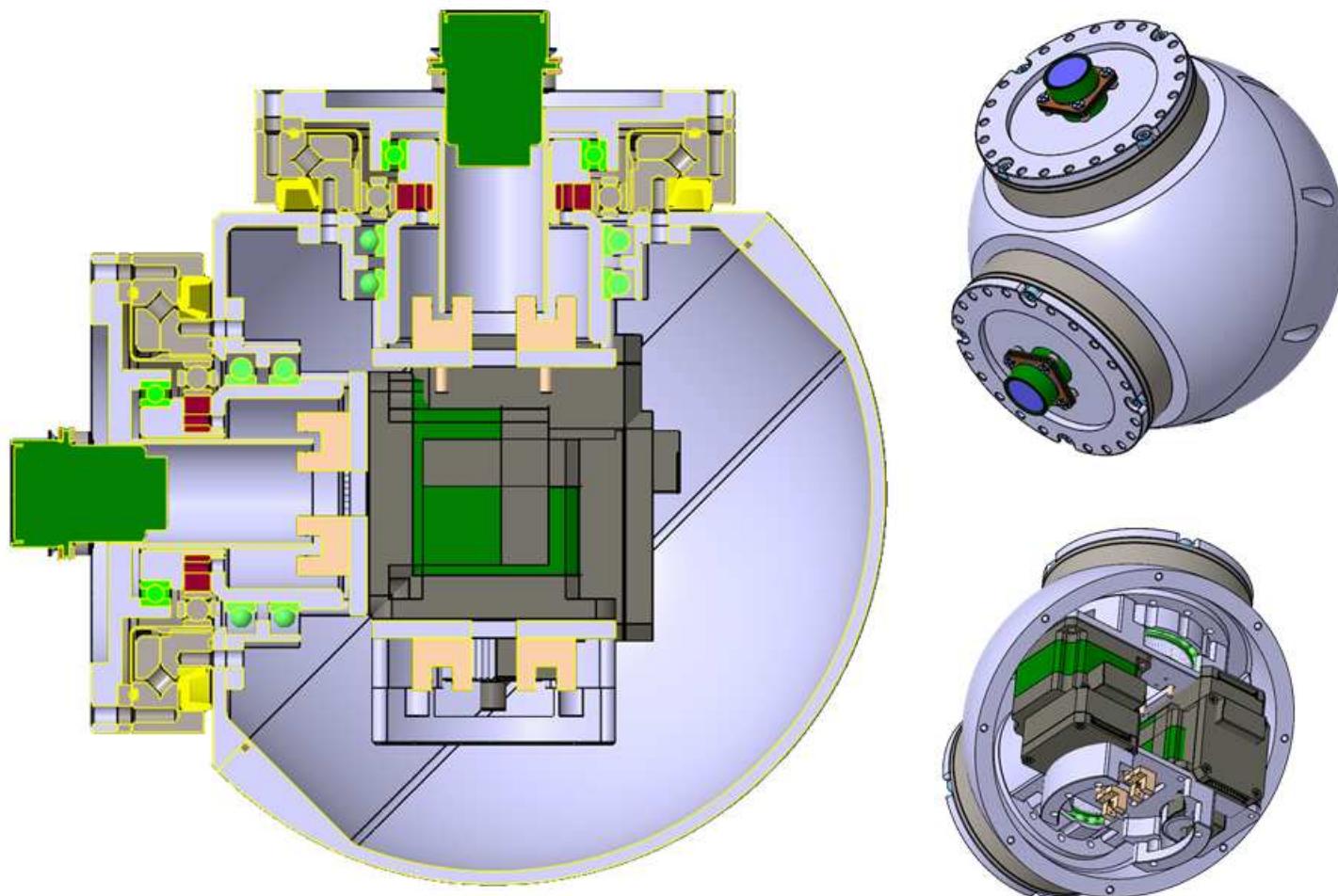
# Defence Robots

2015~2016

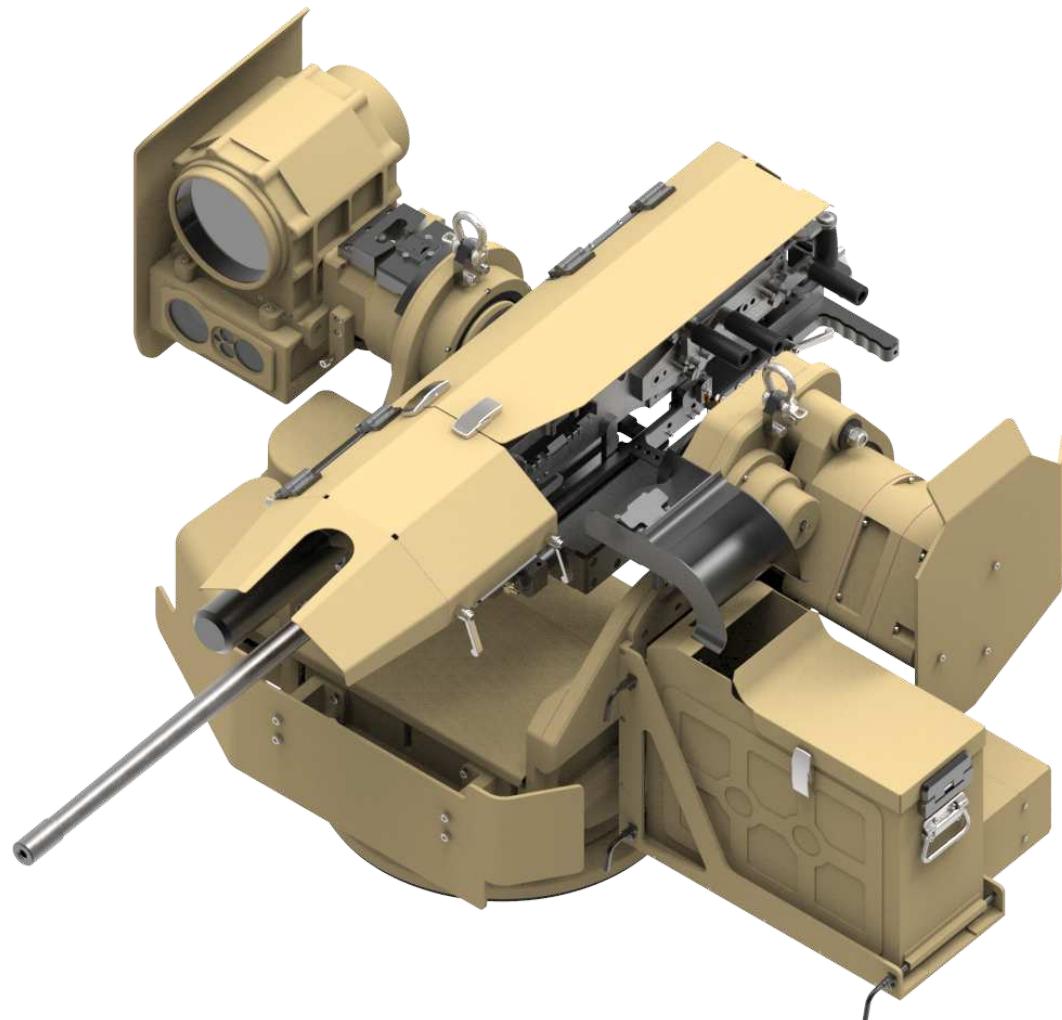
- Modulized Smart Actuator for RCWS



- Modulized PTZ for RCWS



- Remote Control Weapon System



- Remote Control Weapon System



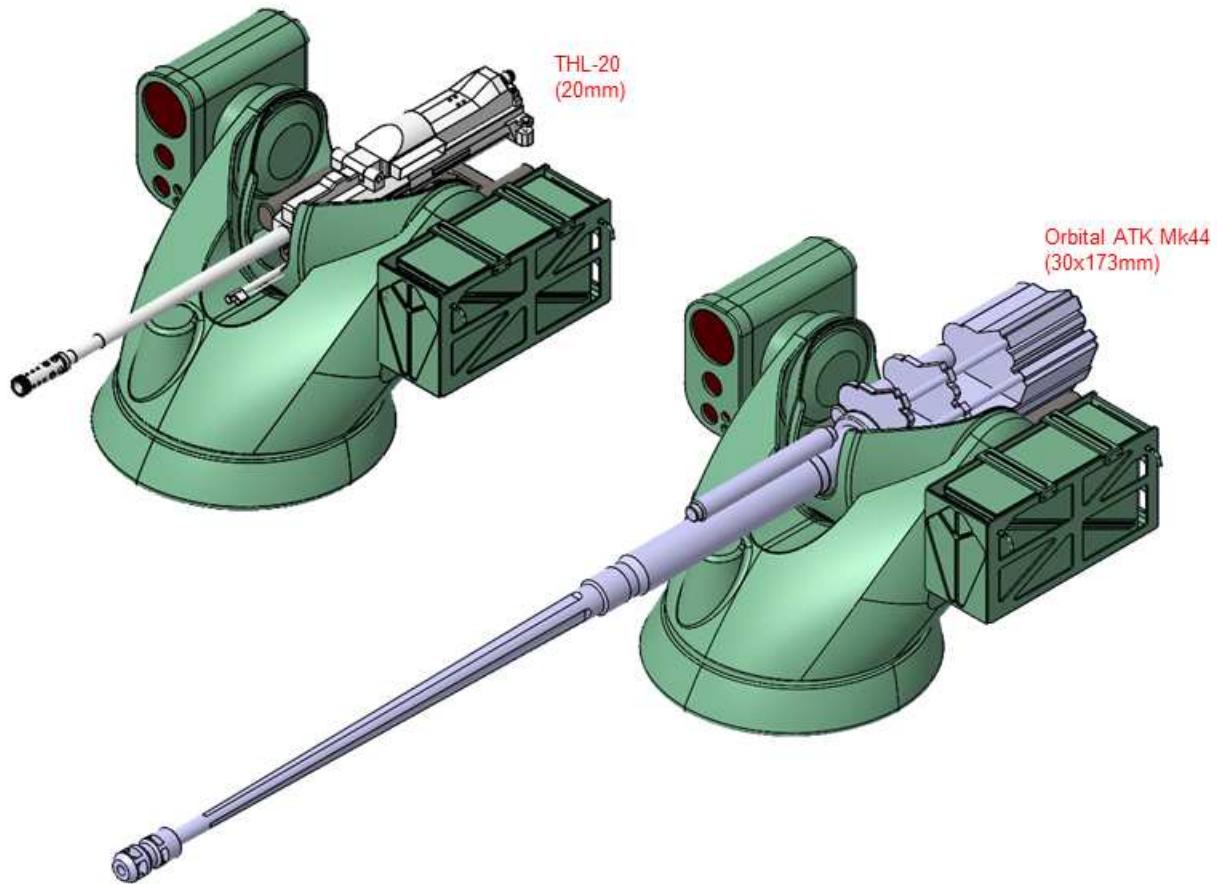
- Shooting Test 



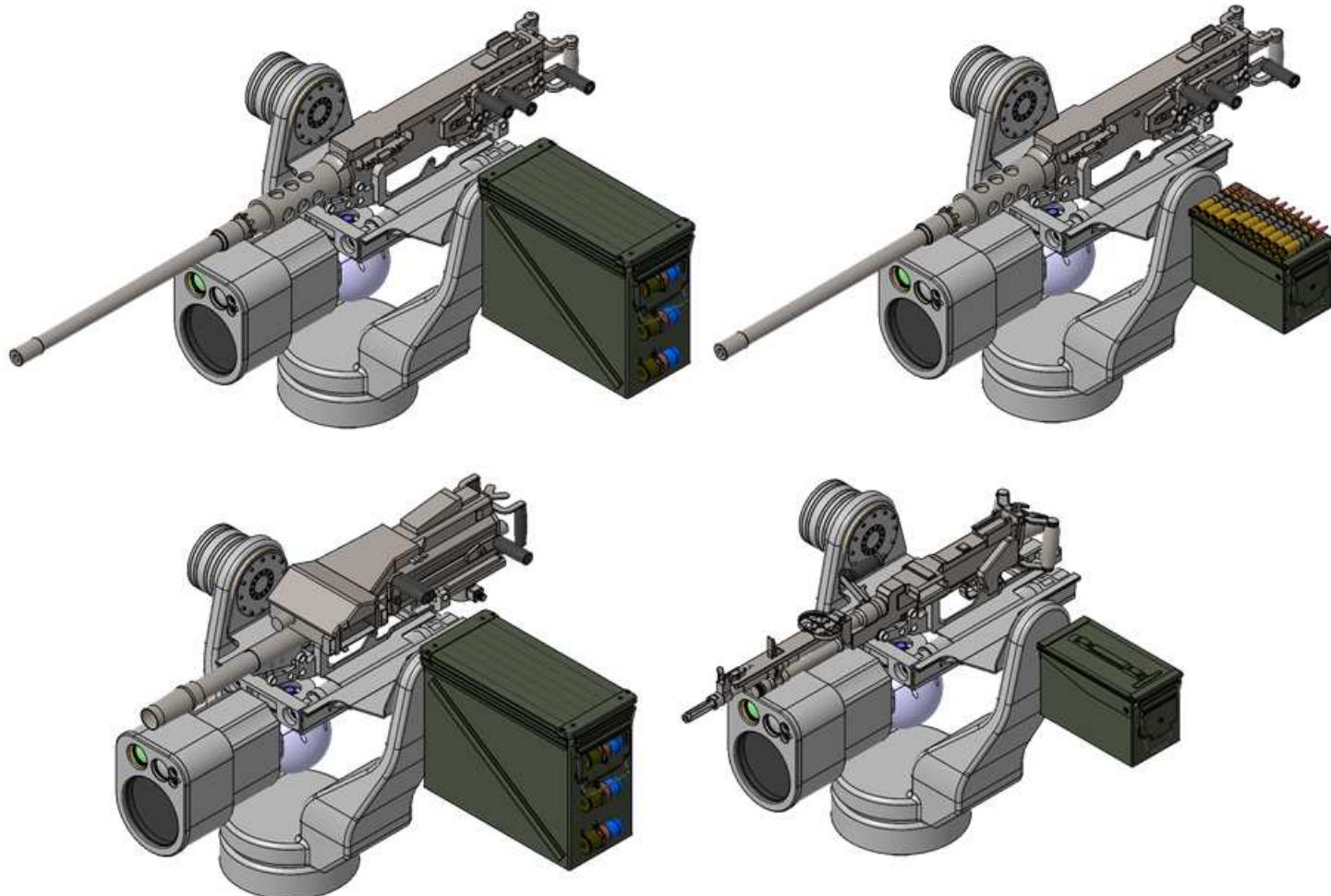
- Export abroad



- HRCWS for 20mm, 30mm



- SRCWS for 7.62mm, 12.7mm, 40mm



# **Mobile Robots**

*2007~2015*

- UROBO



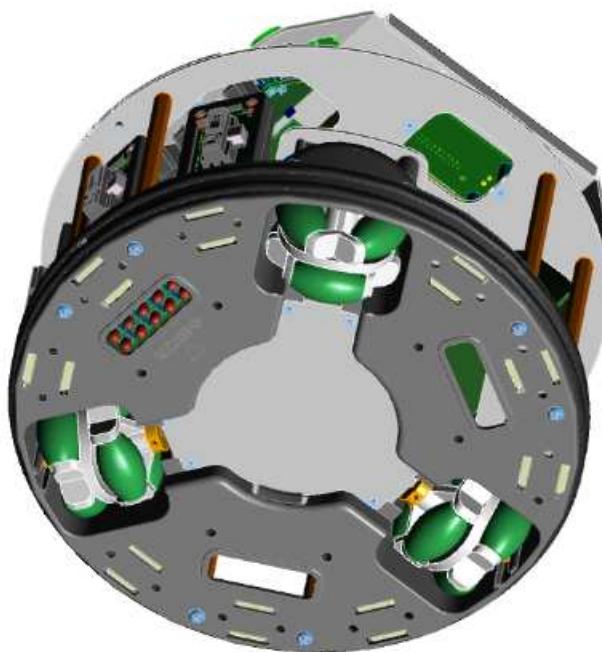
- UBOT fot KT 



- THIN 



- HOLOMOMIC 



- SILVER



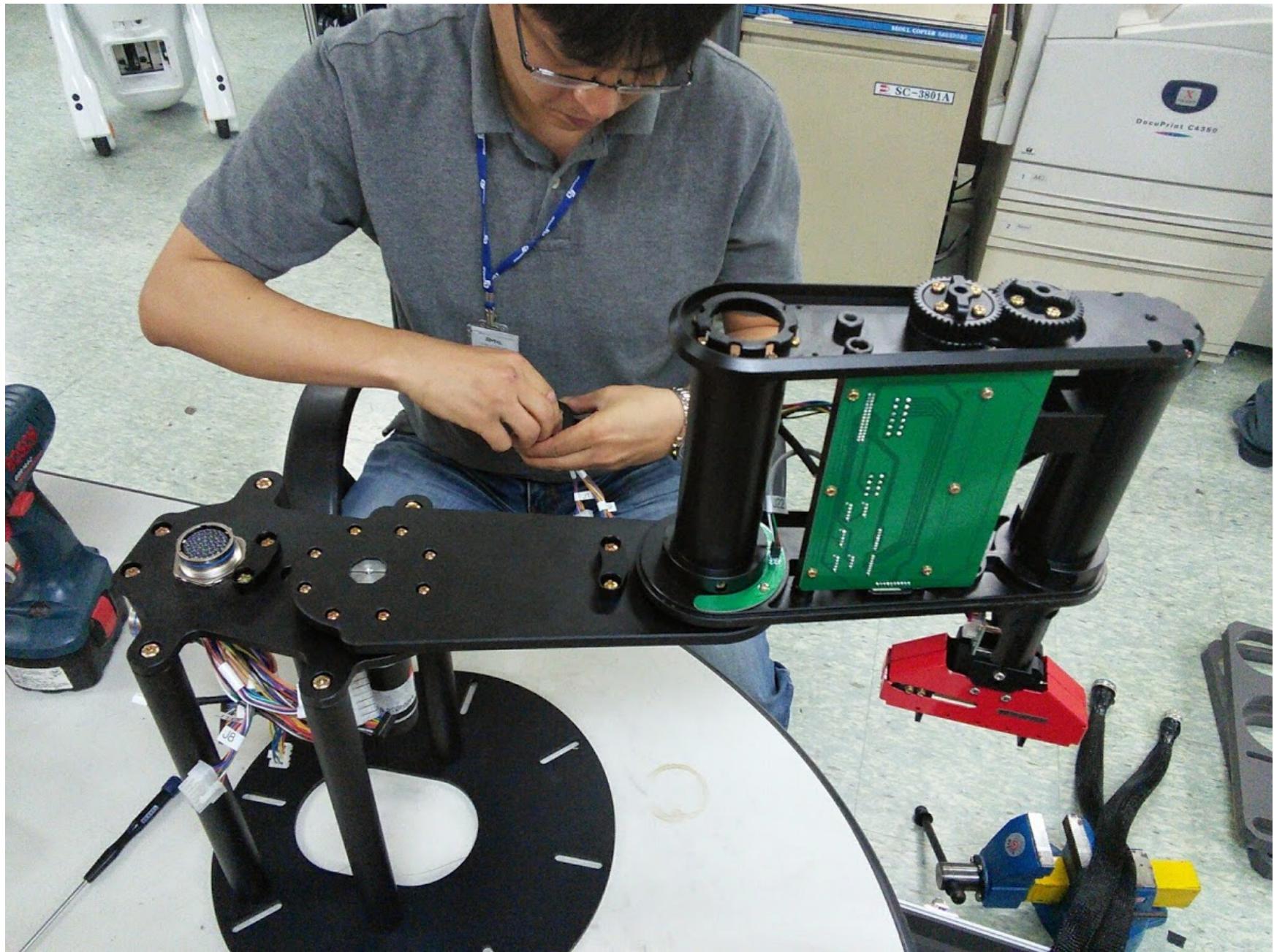
- SILVER in exhibition



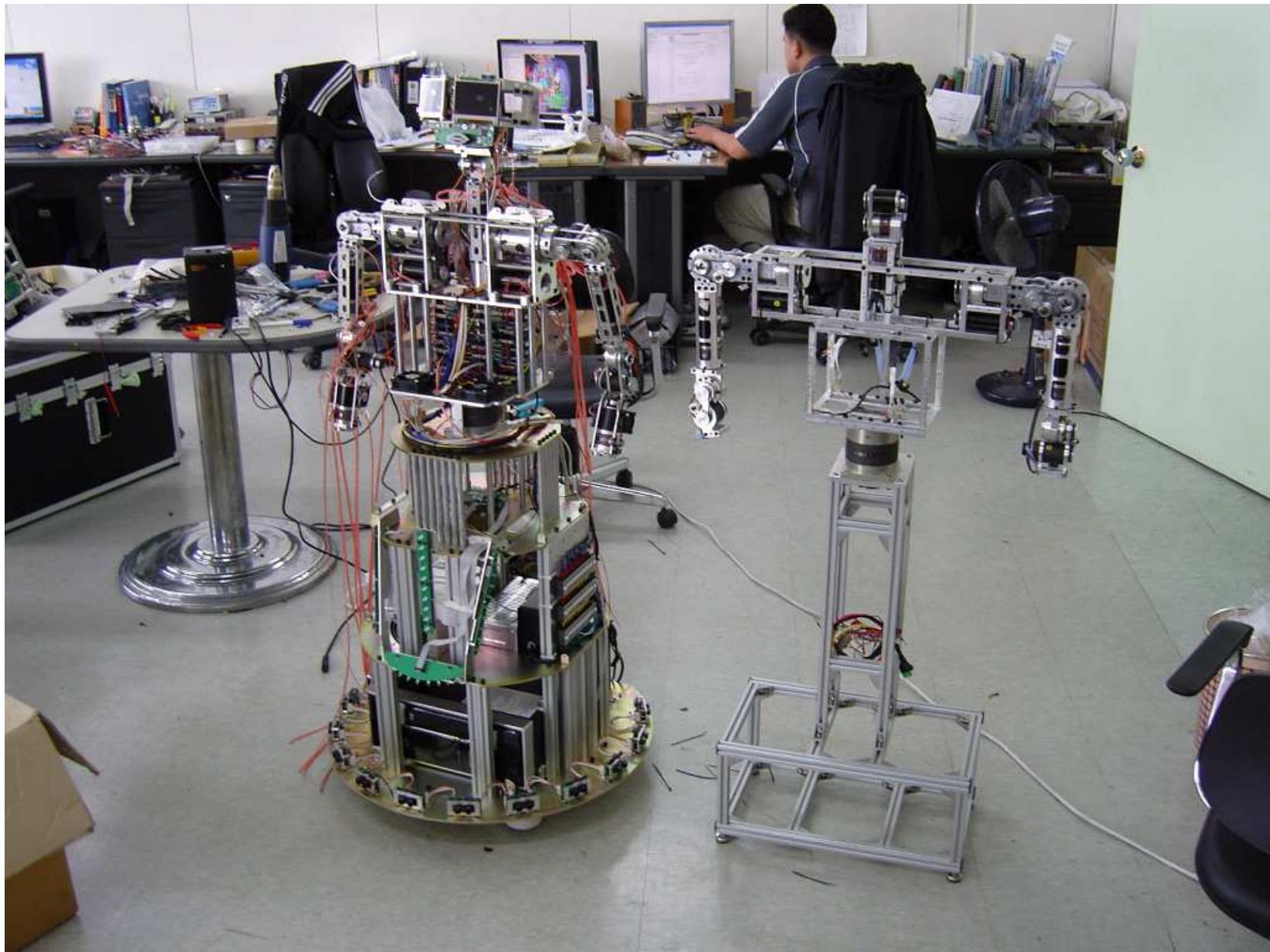
# **Arm Robots**

*2007~2015*

- SCARA



- ARO Prototype (2007)



- ARO1 (2008)



- ARO2 (2009) 



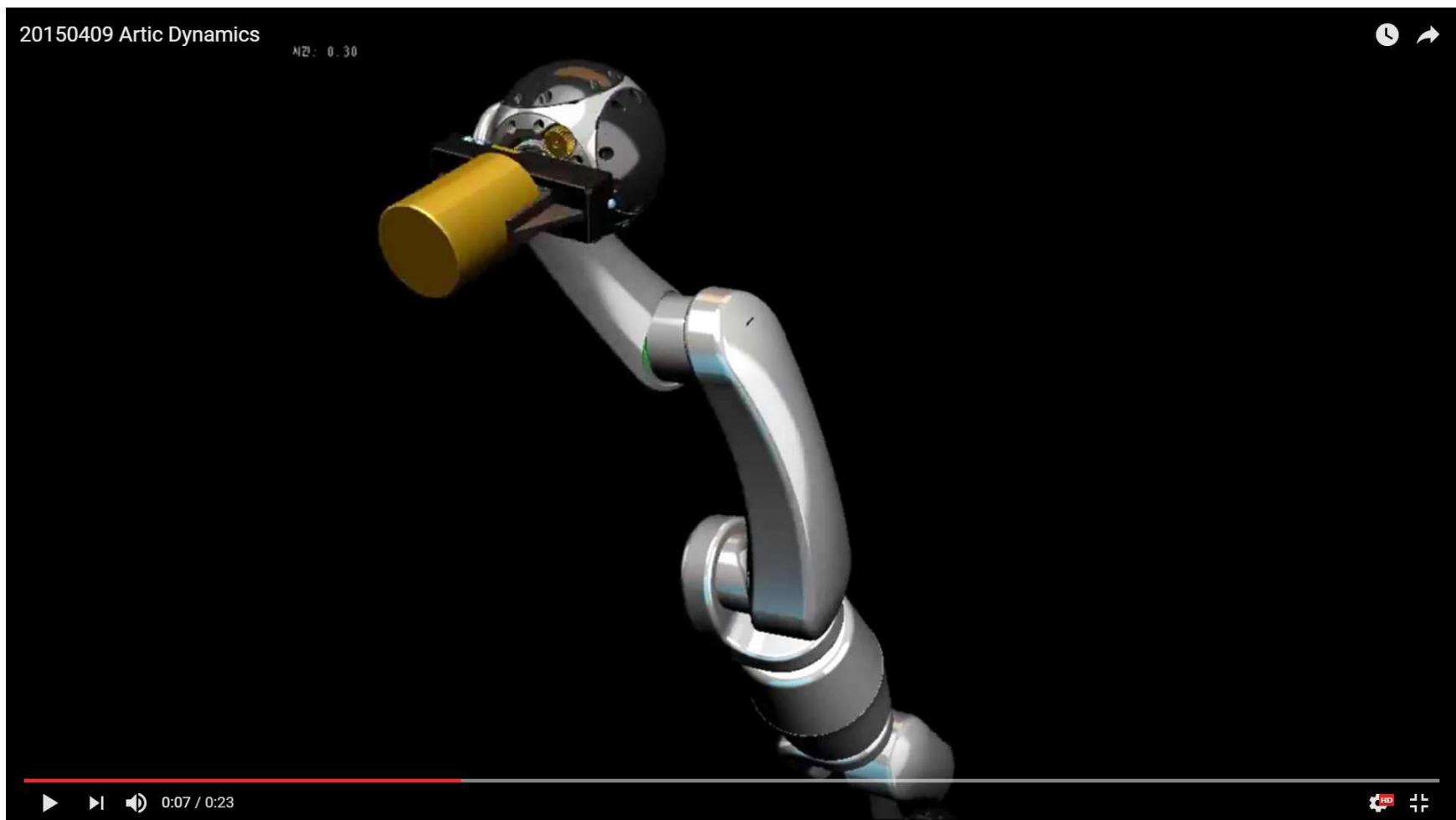
- ARO3 (2010)



- ELISA (2013~2014) 



- ARTIC Dynamics 



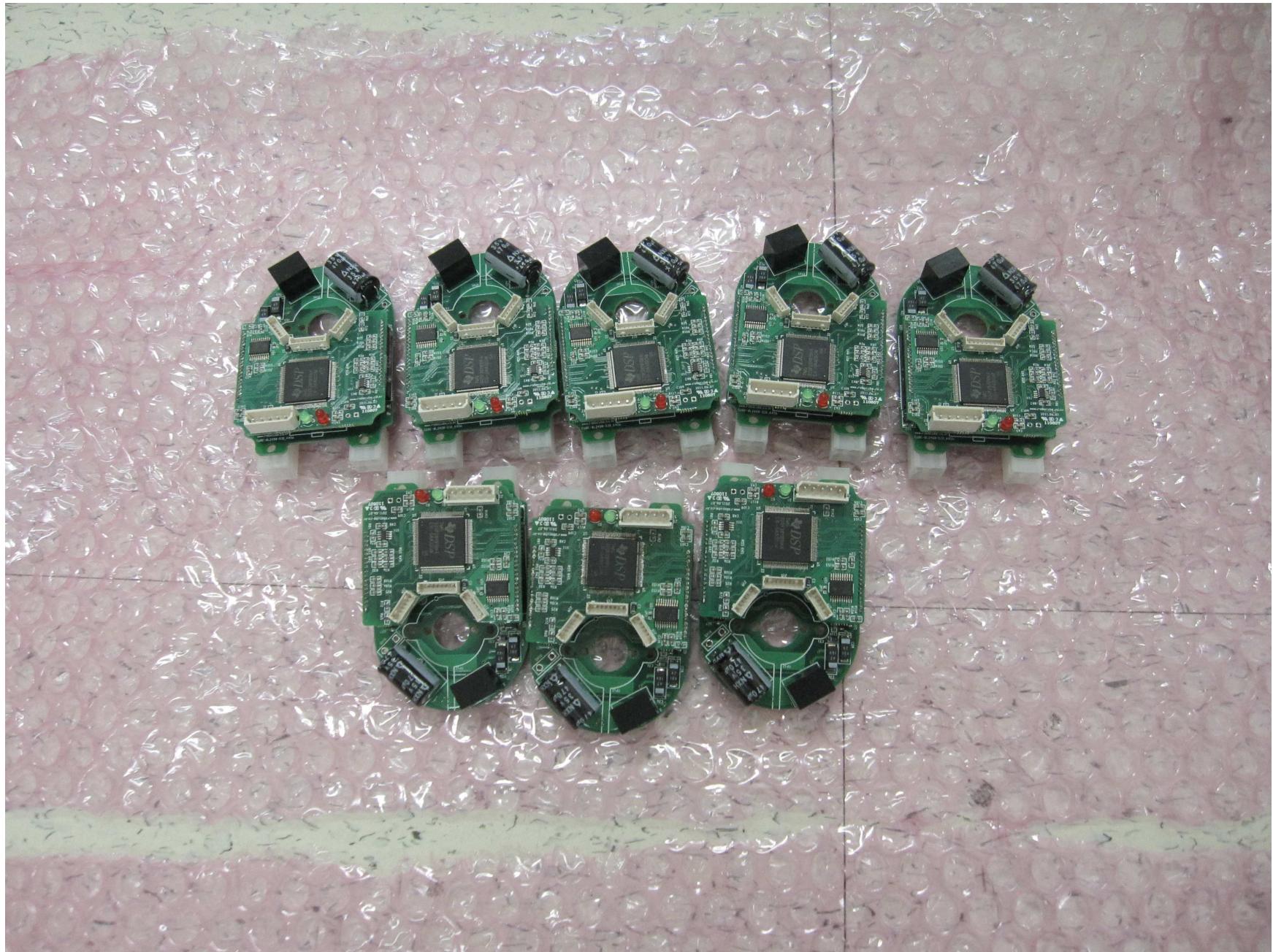
- FST for EOD Prototype



- K201 Prototype



- K201 Motion controller



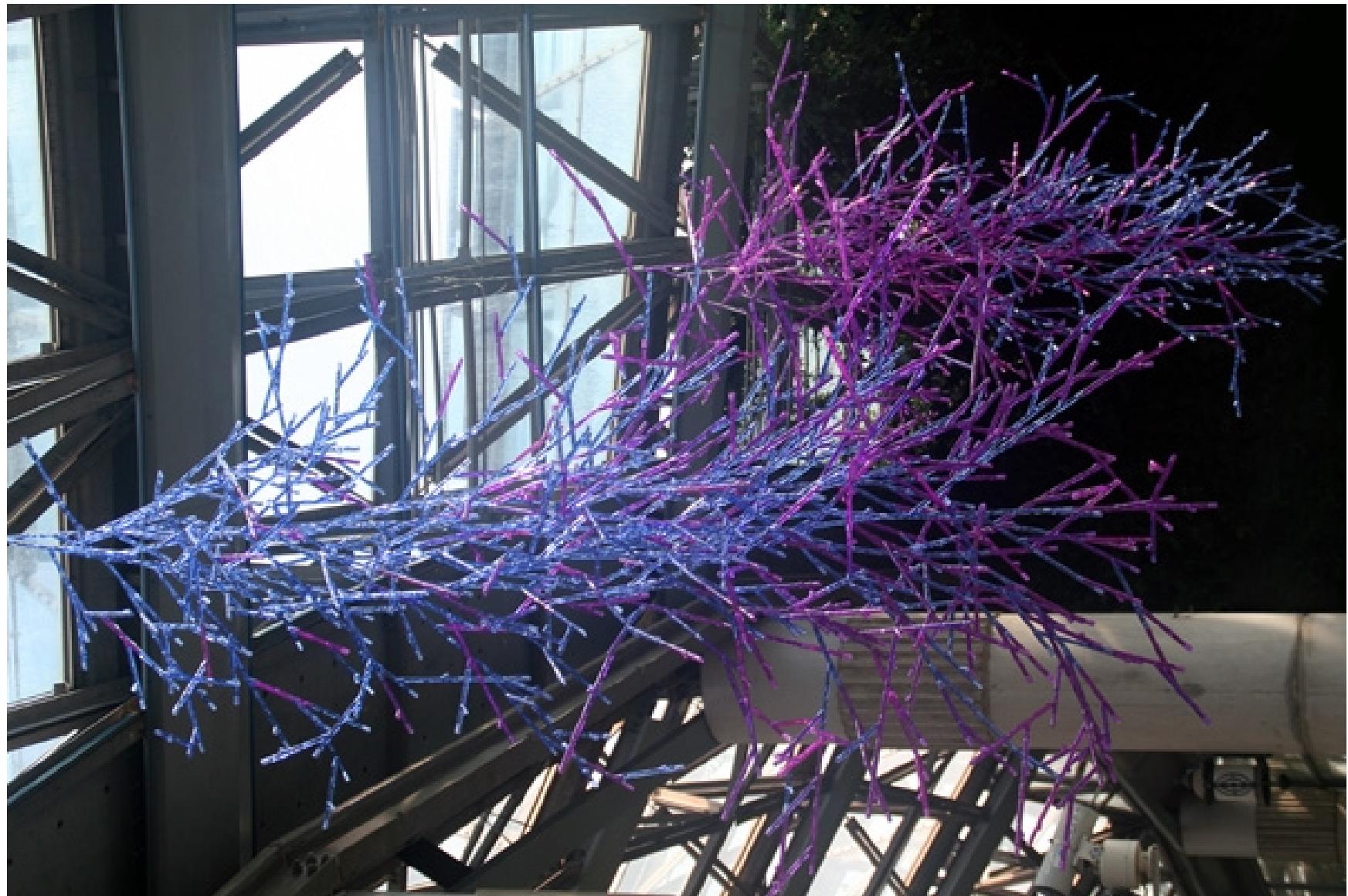
- K201



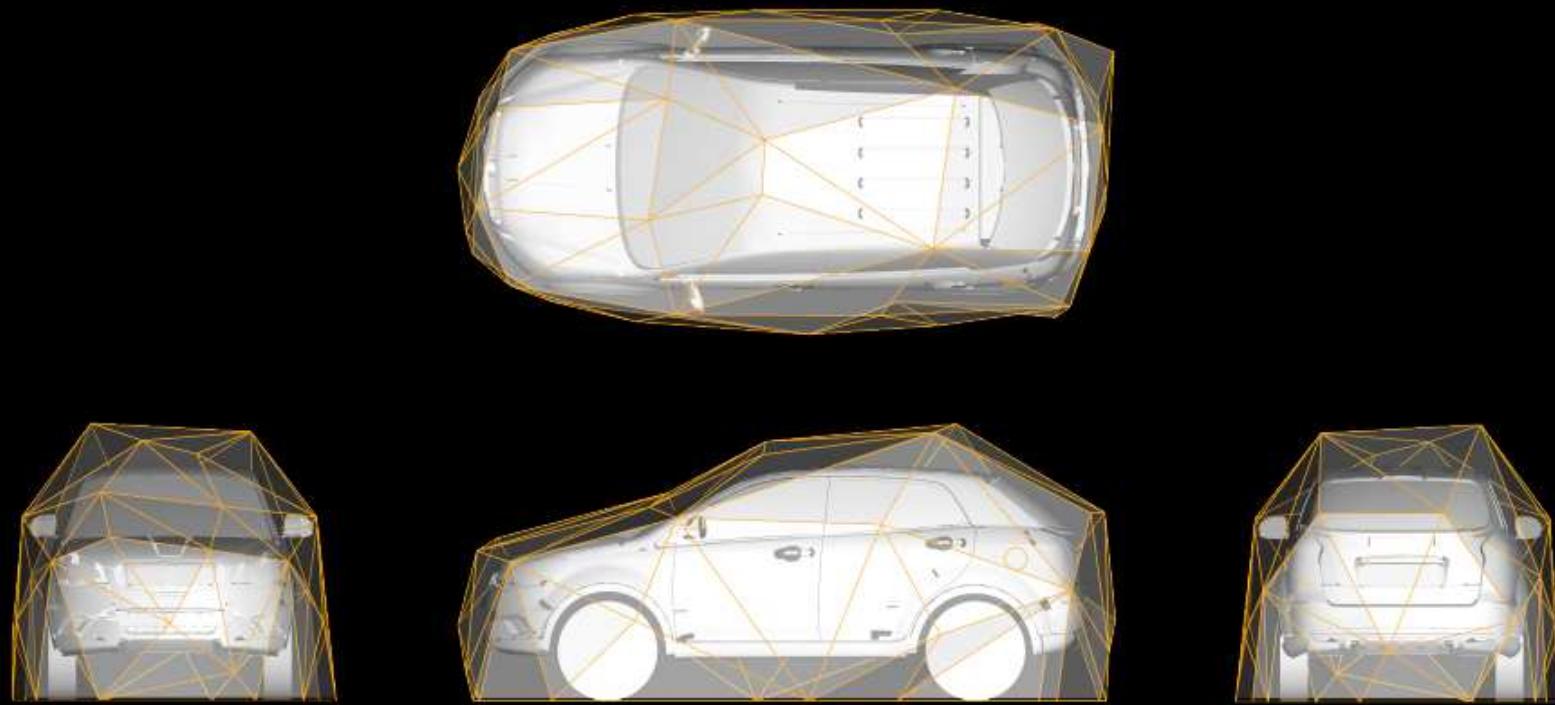
# Kinetic Art

2011~2012

- 이장섭 작가, SIM, 제주 여미지 식물원, 2009~2011



- C200 : 쌍용자동차 신차 디스플레이 계획



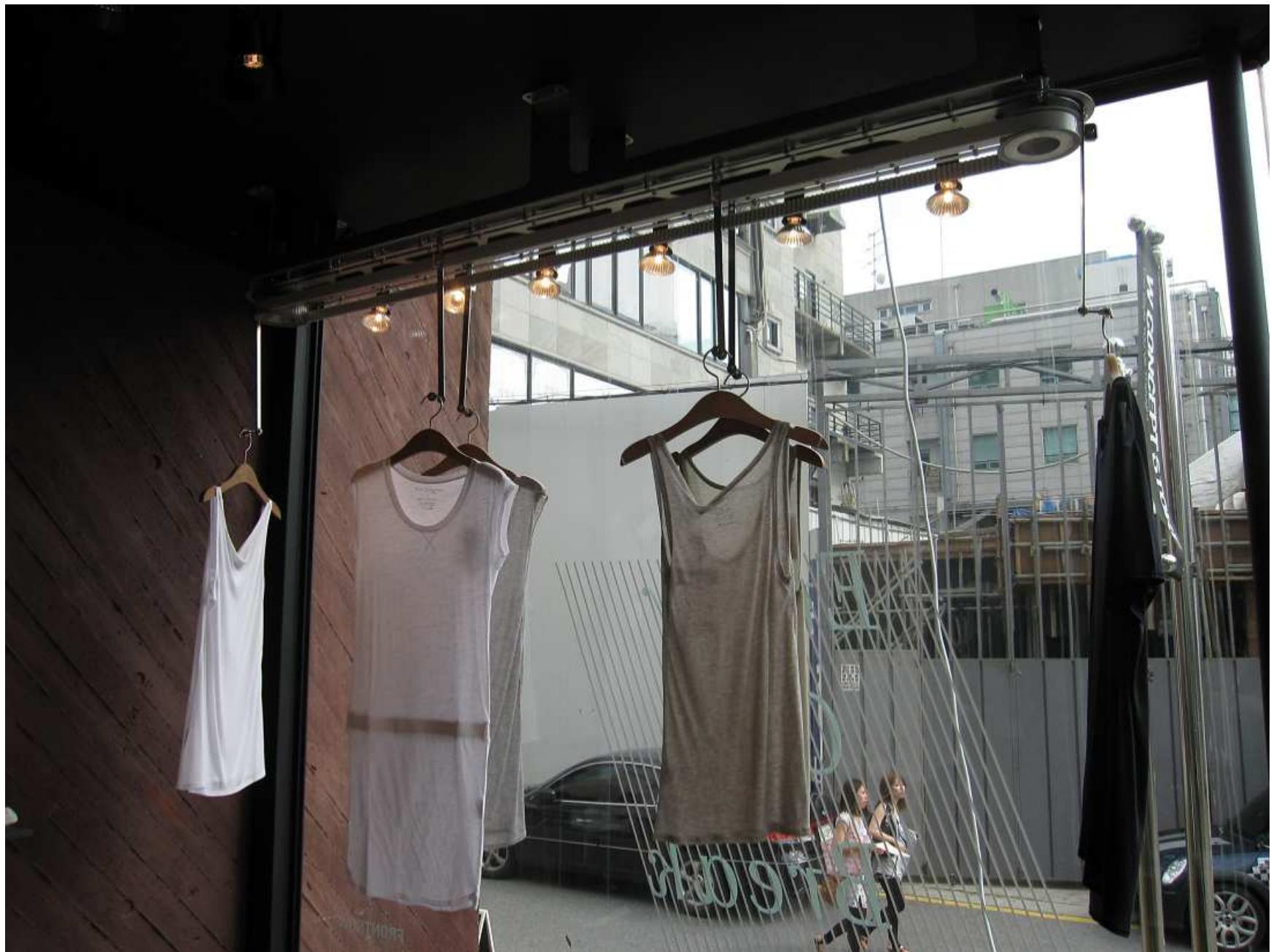
- 신사동 W Concept 디스플레이 



- 신사동 W Concept 디스플레이 



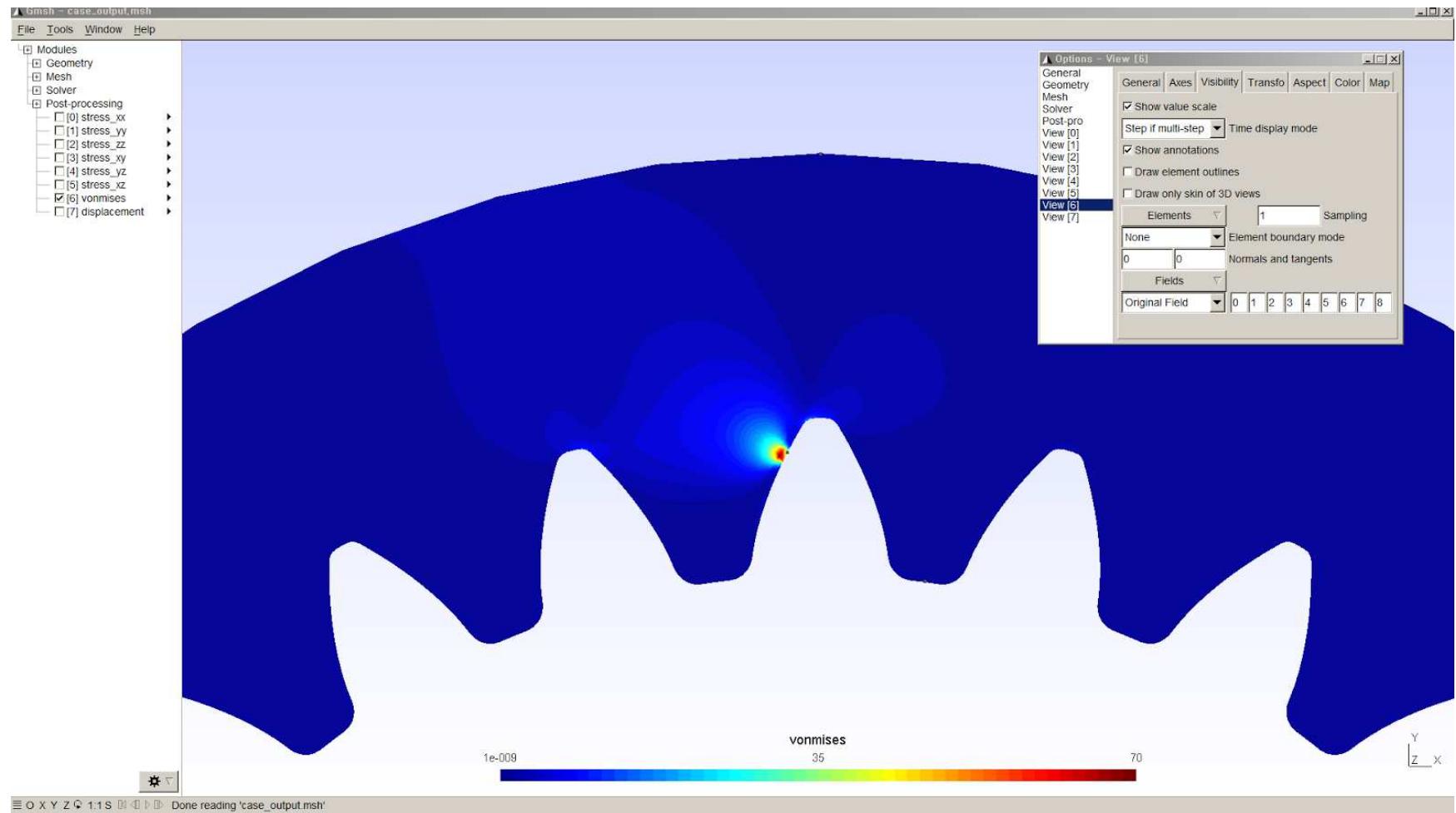
- 신사동 W Concept 디스플레이 



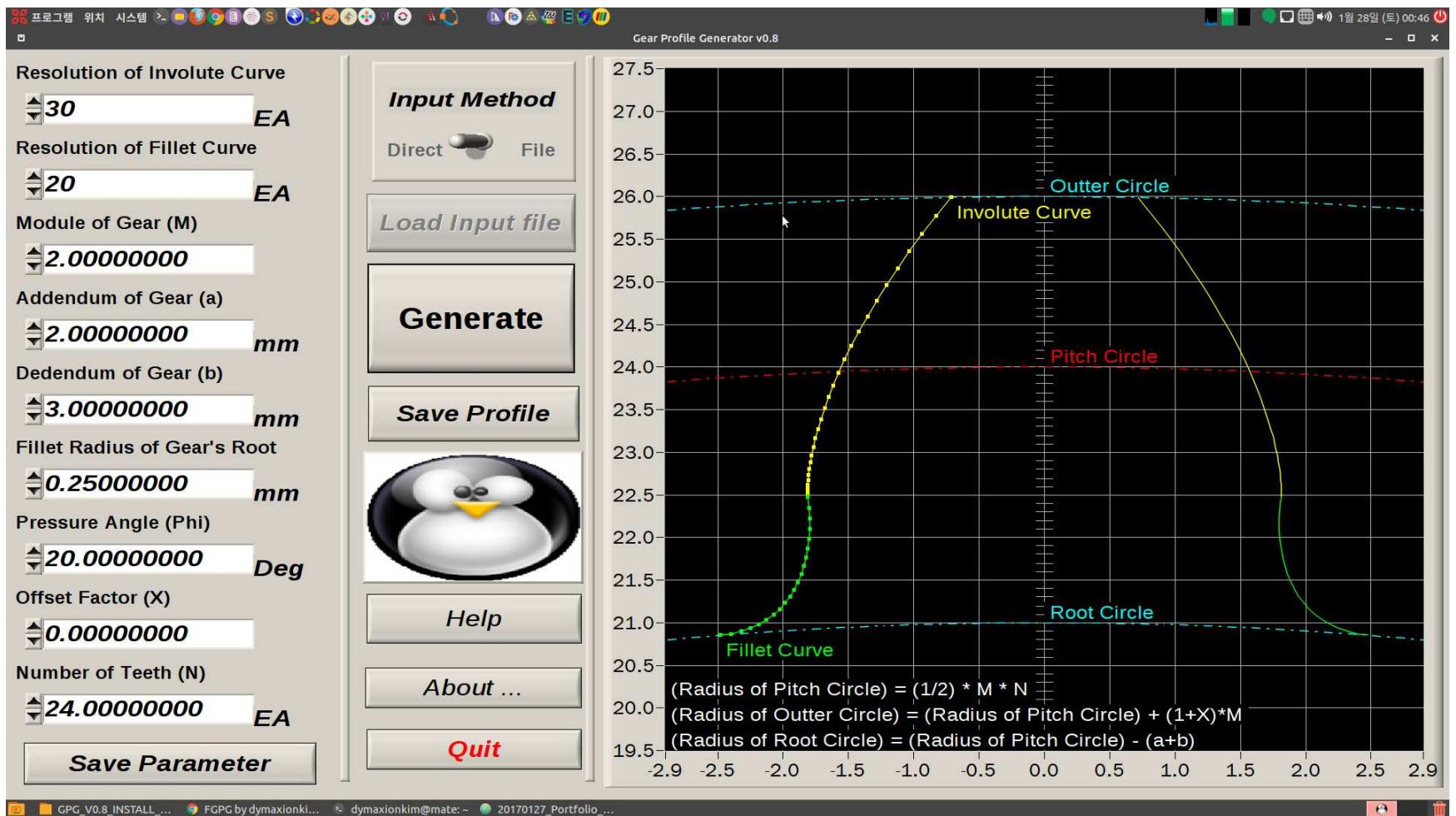
# **Numerical Design and Analysis**

*based on OpenSource Solutions*

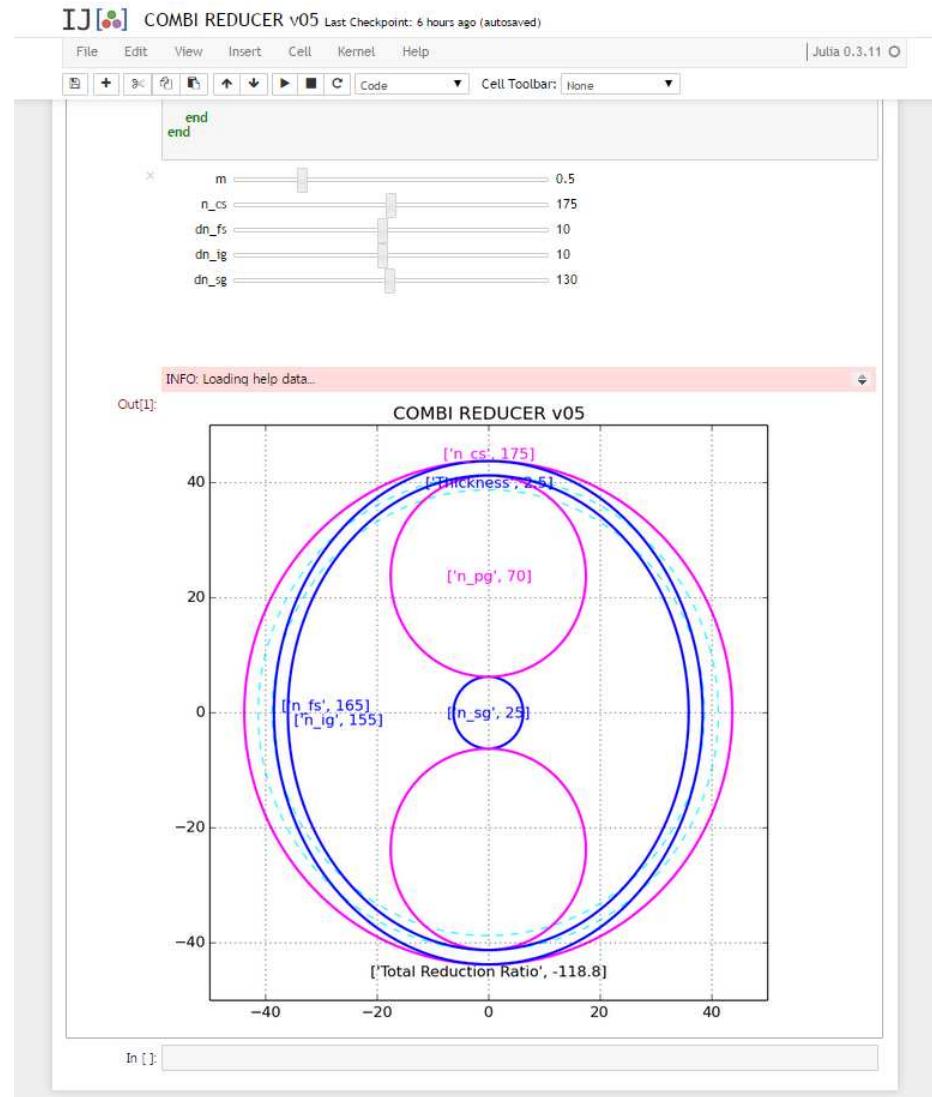
- Fine Gear Profile Generation and Analysis (Julia Lang)



## • Gear Profile Generator (C Lang)



- COMBI : Harmonic Drive Designer (Julia Lang)

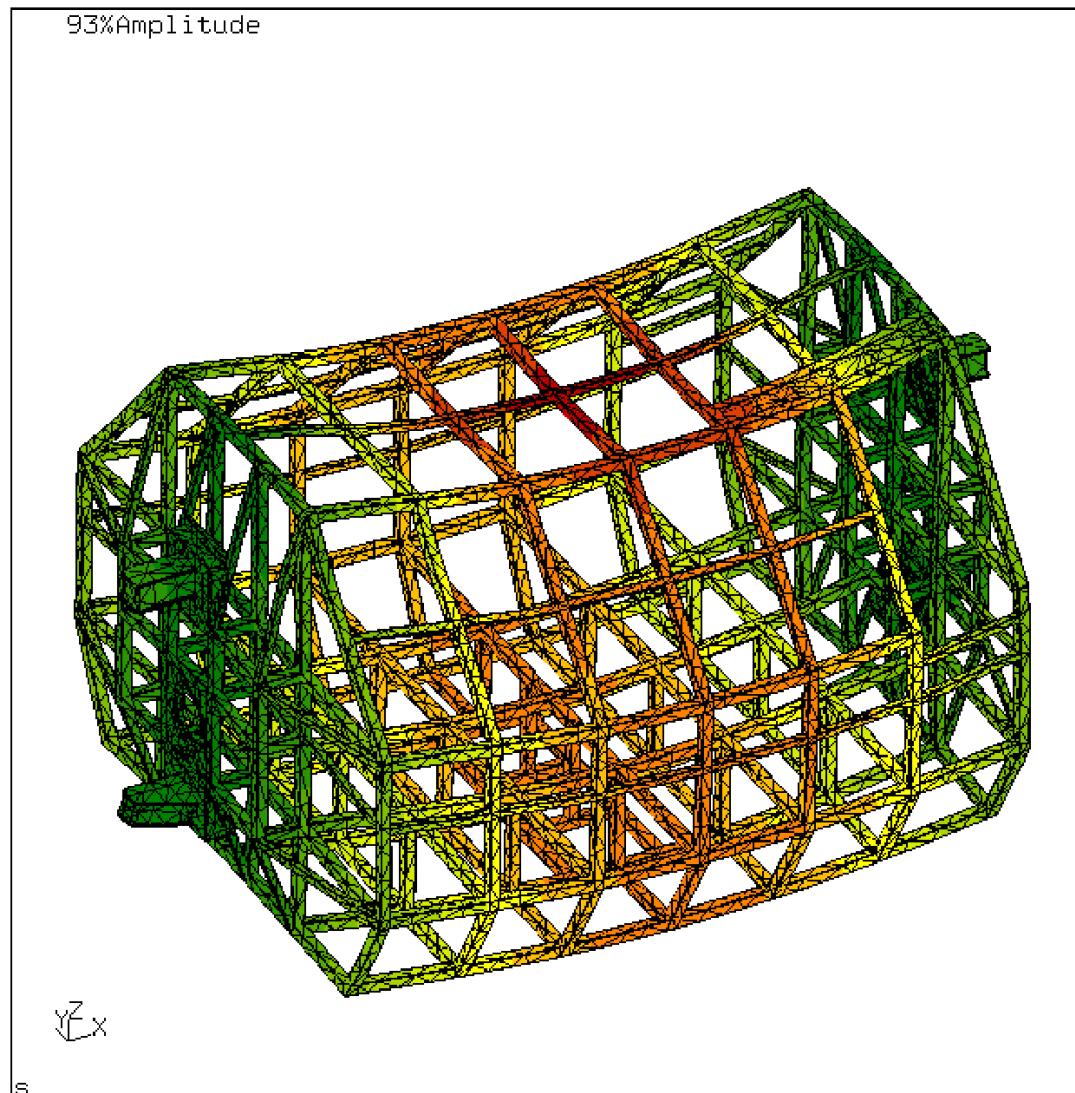
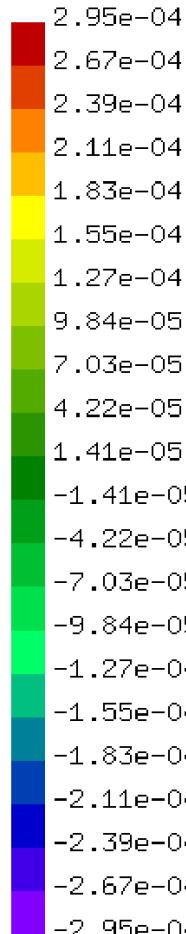


- Submarine Simulator's Frame FEA (CalculiX)

**DoDAM** Result  
SYSTEMS LTD.

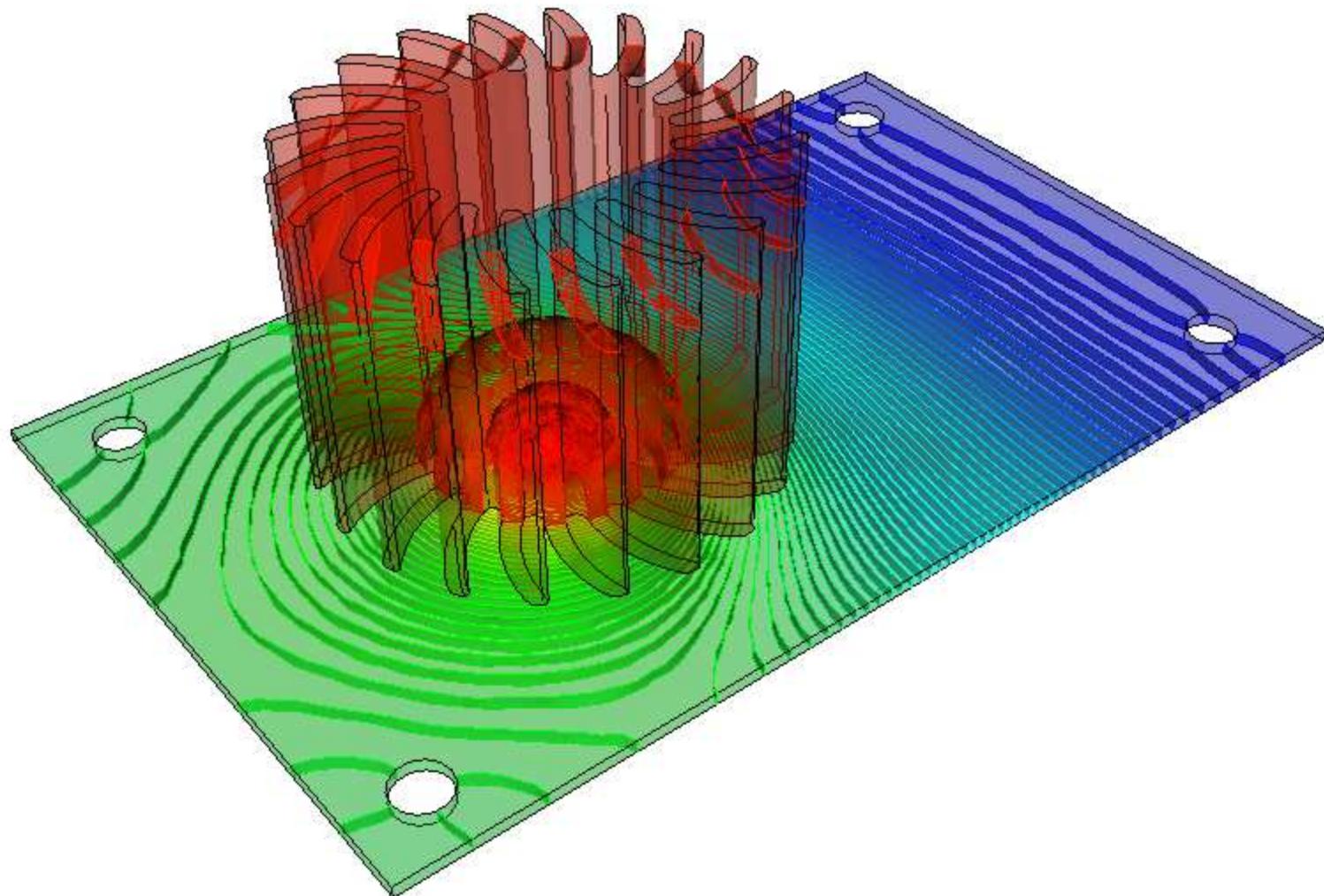
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Time:1.000000  
Entity:ALL

max: 2.95e-04  
min: 0.00e+00

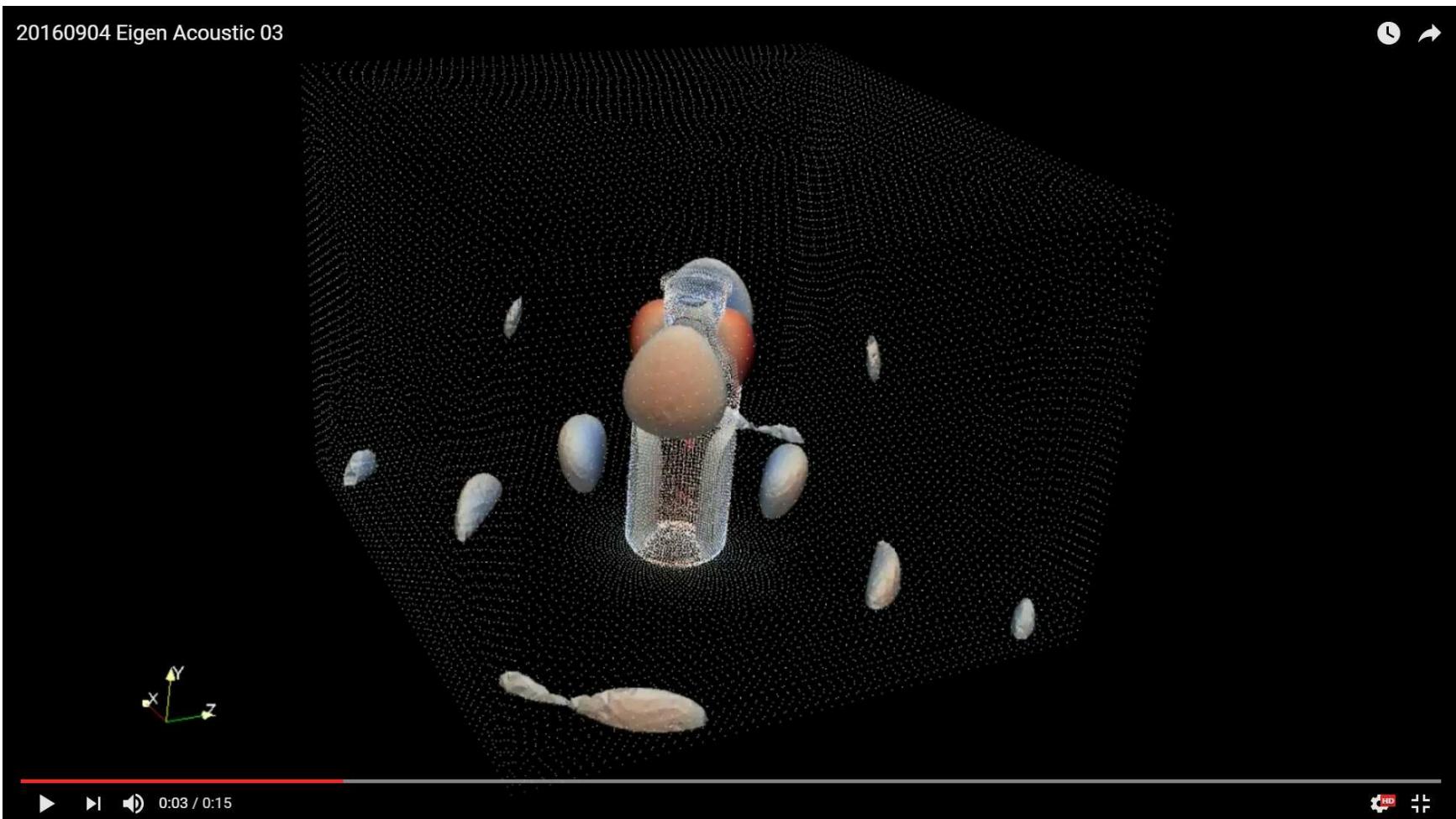


/home/dong/Documents/Analysis/20160727\_P141\_CalculiX\_Static\_Scaling/\_main.frd

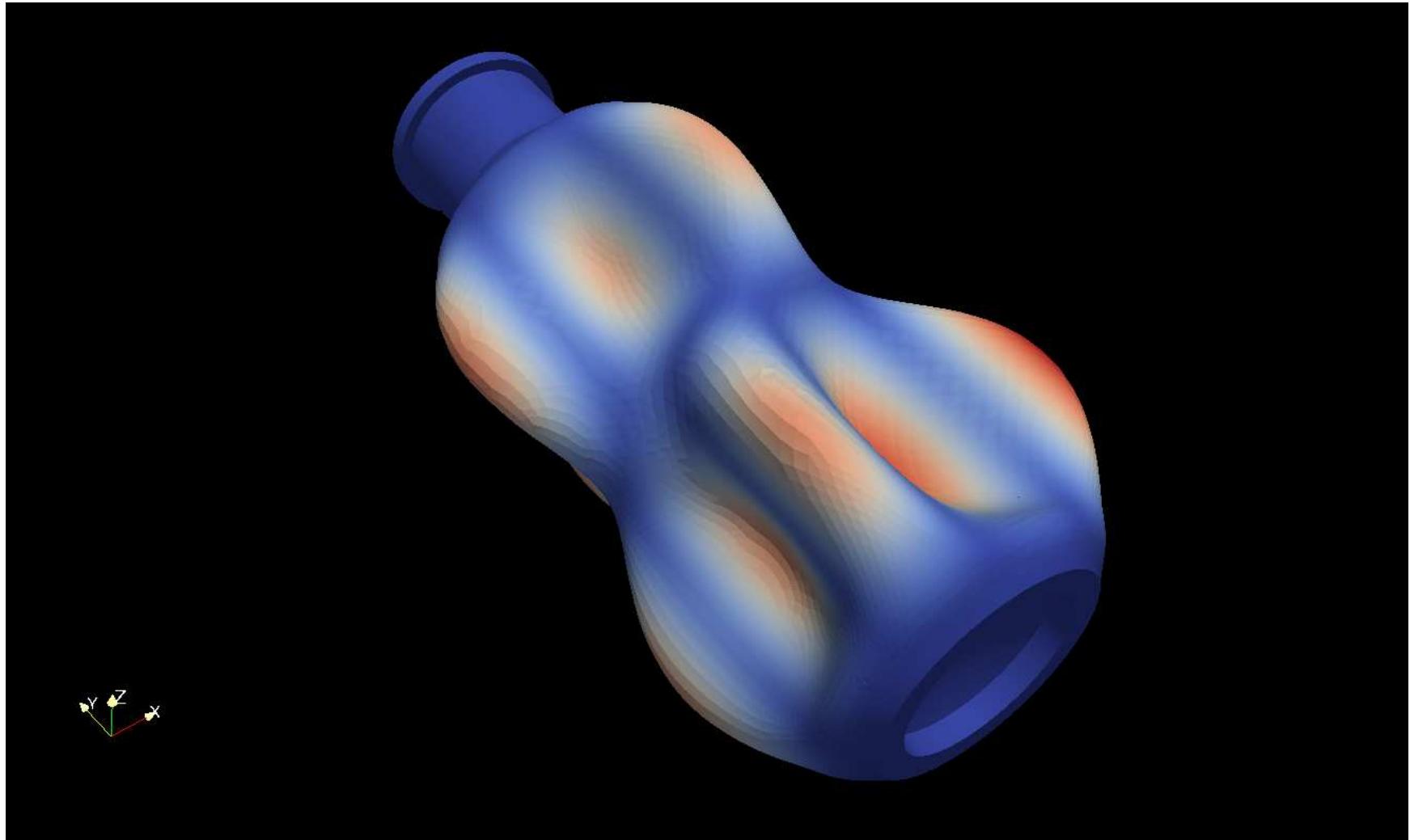
- Transient Heat Transfer (Elmer) 



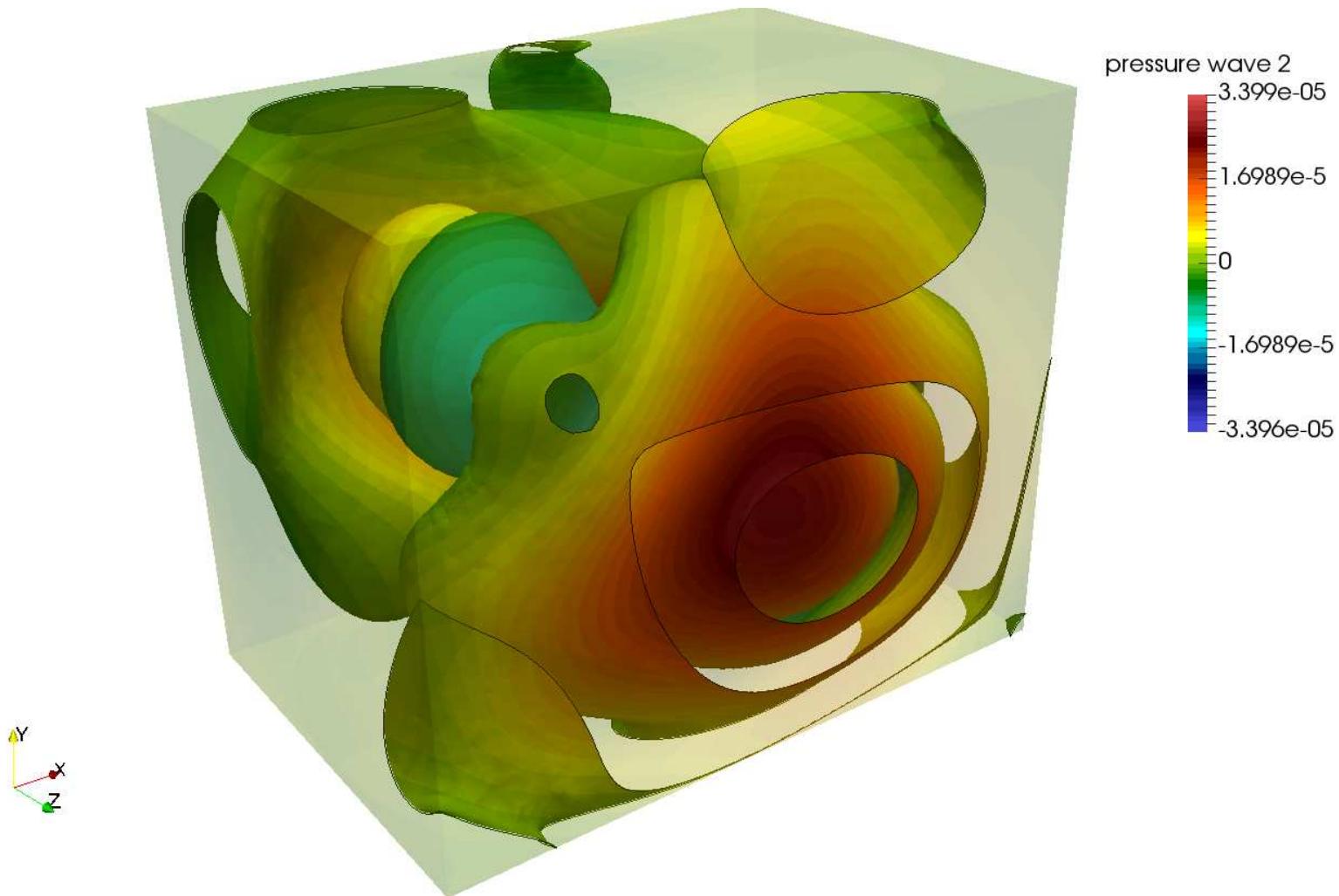
- Eigenvalue Acoustic (Elmer) 



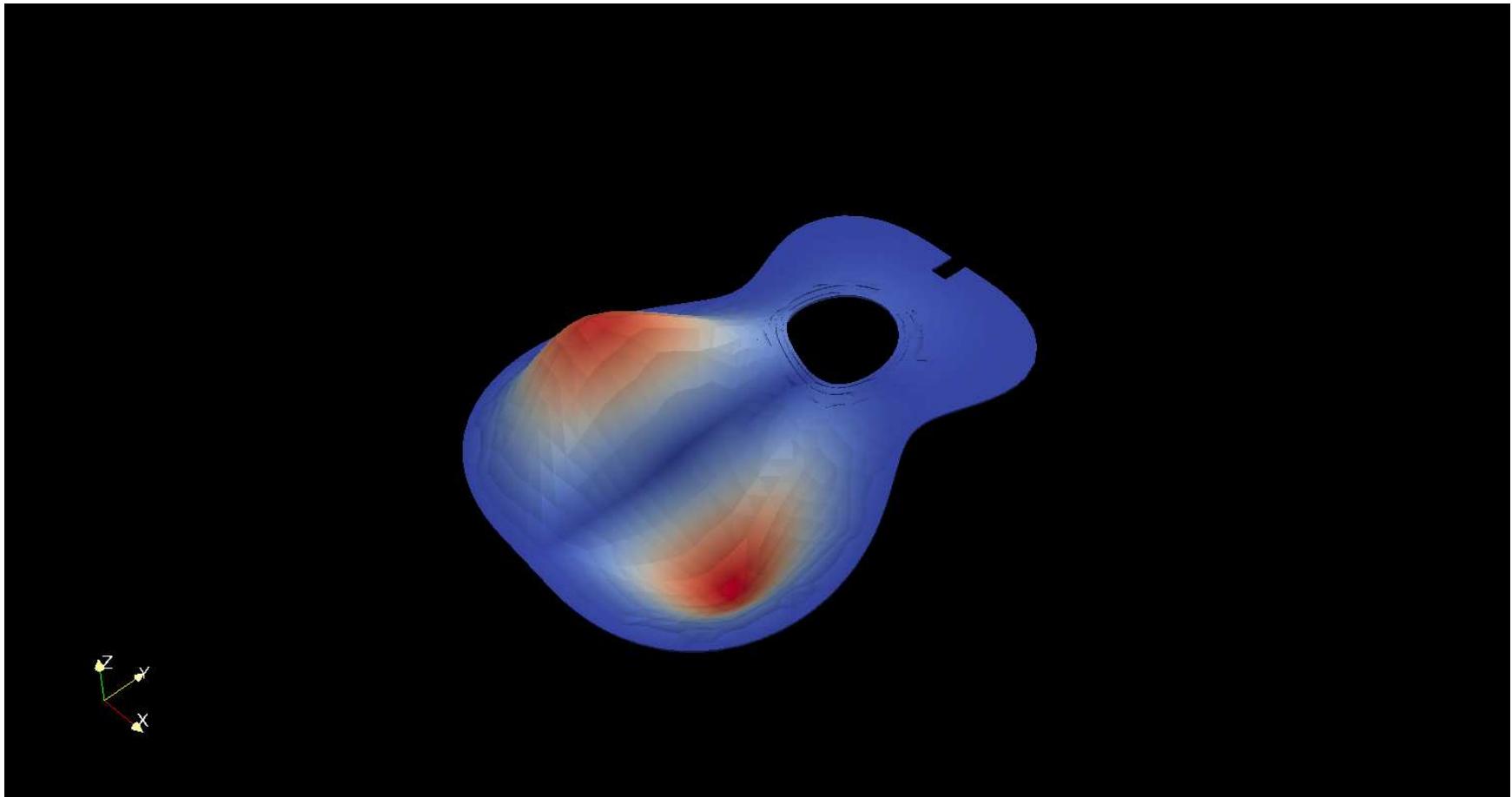
- Linear Buckling (Elmer) 



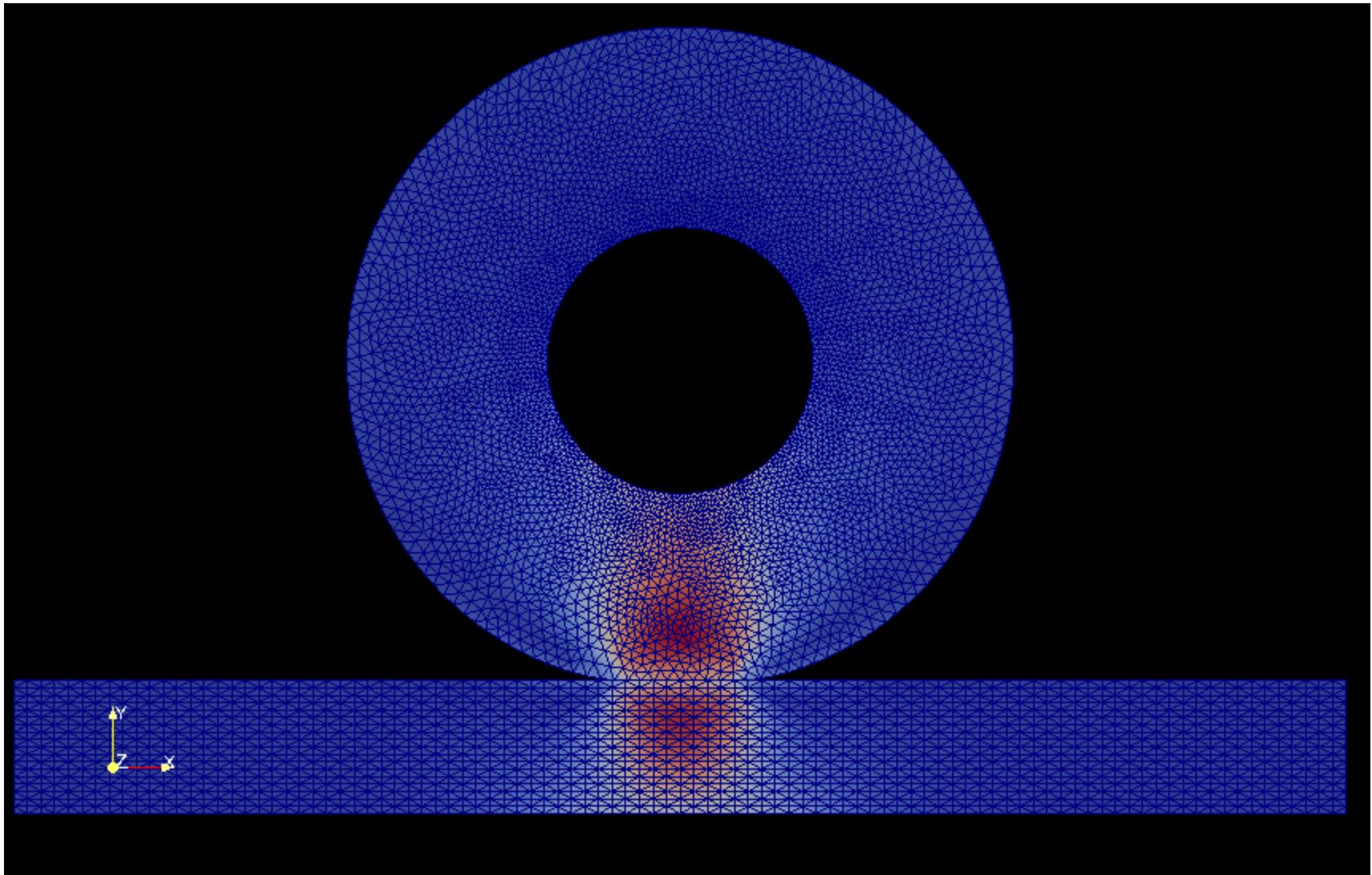
- Harmonic Acoustics (Elmer) 



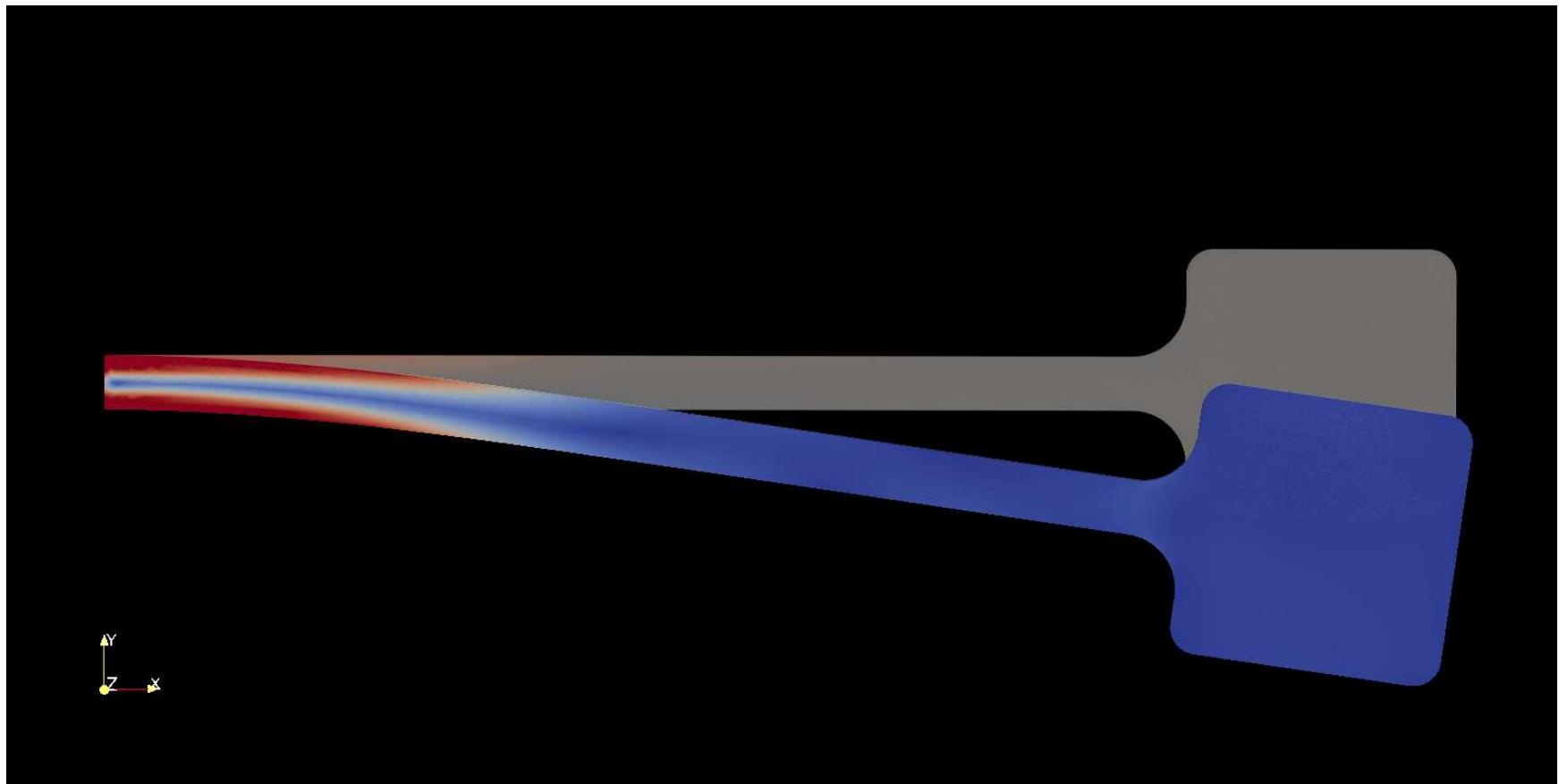
- Eigenmodes (Elmer) 



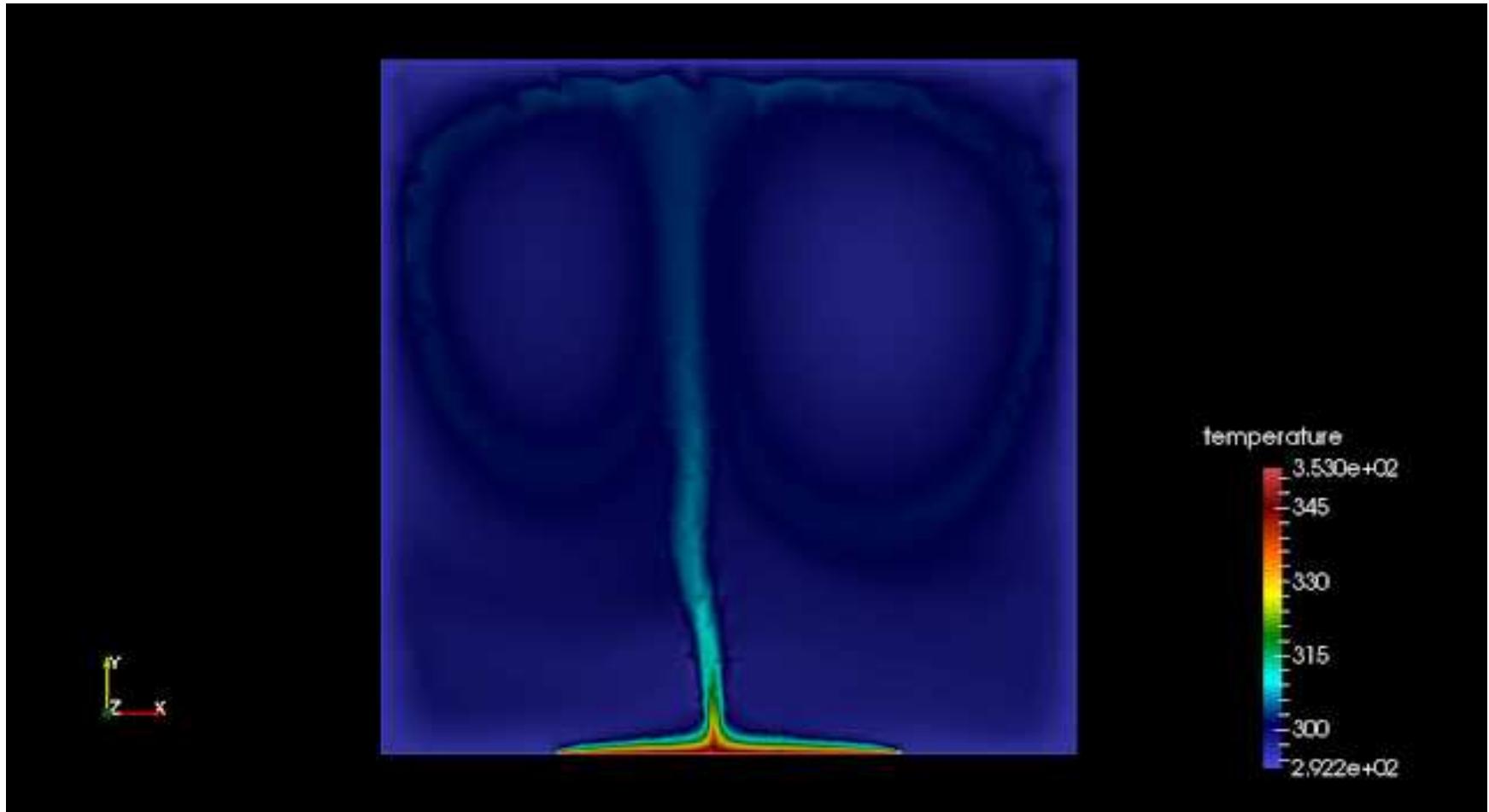
- Contact (Elmer) 



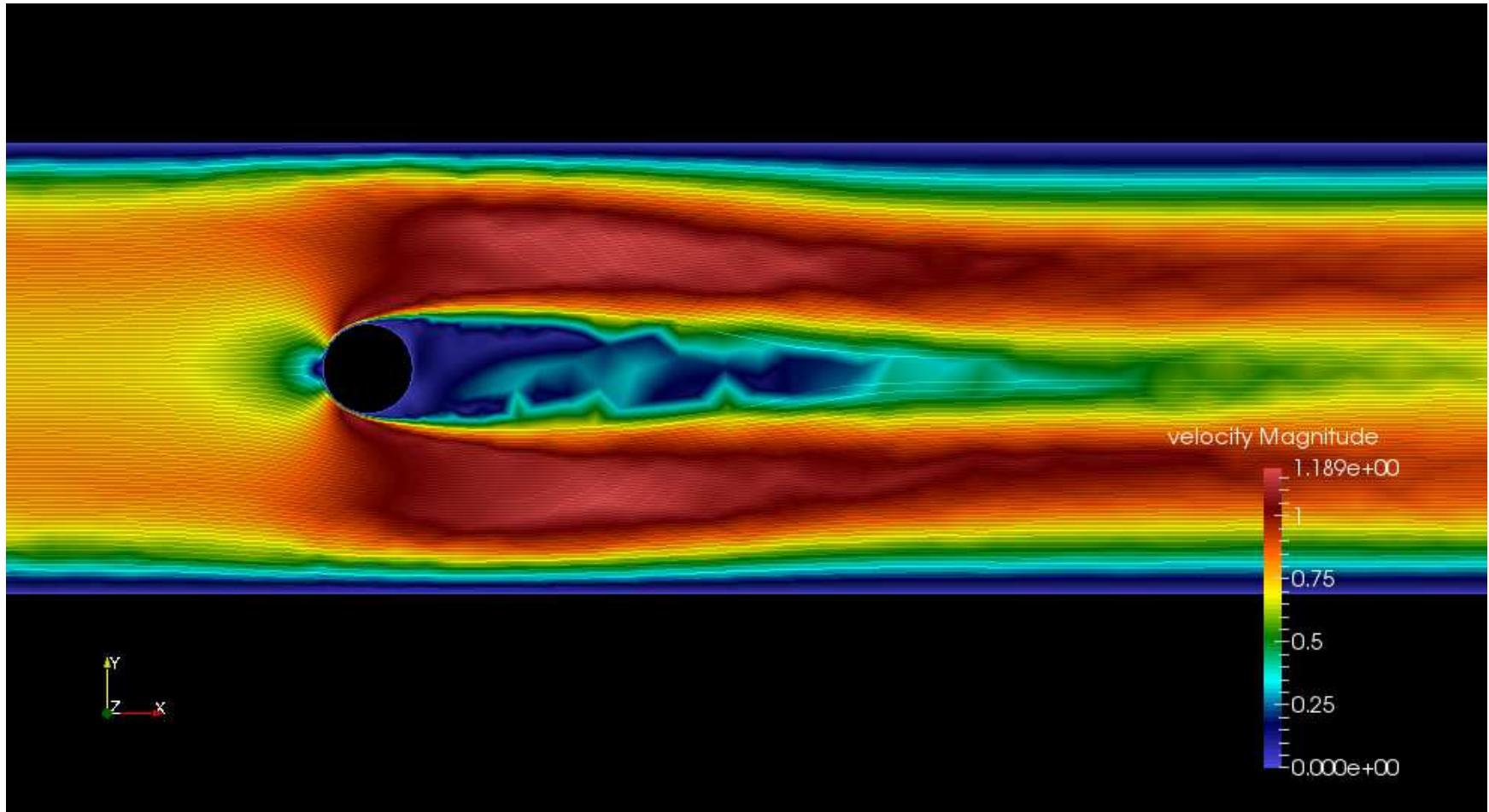
- Transient Dynamic Elasticity (Elmer) 



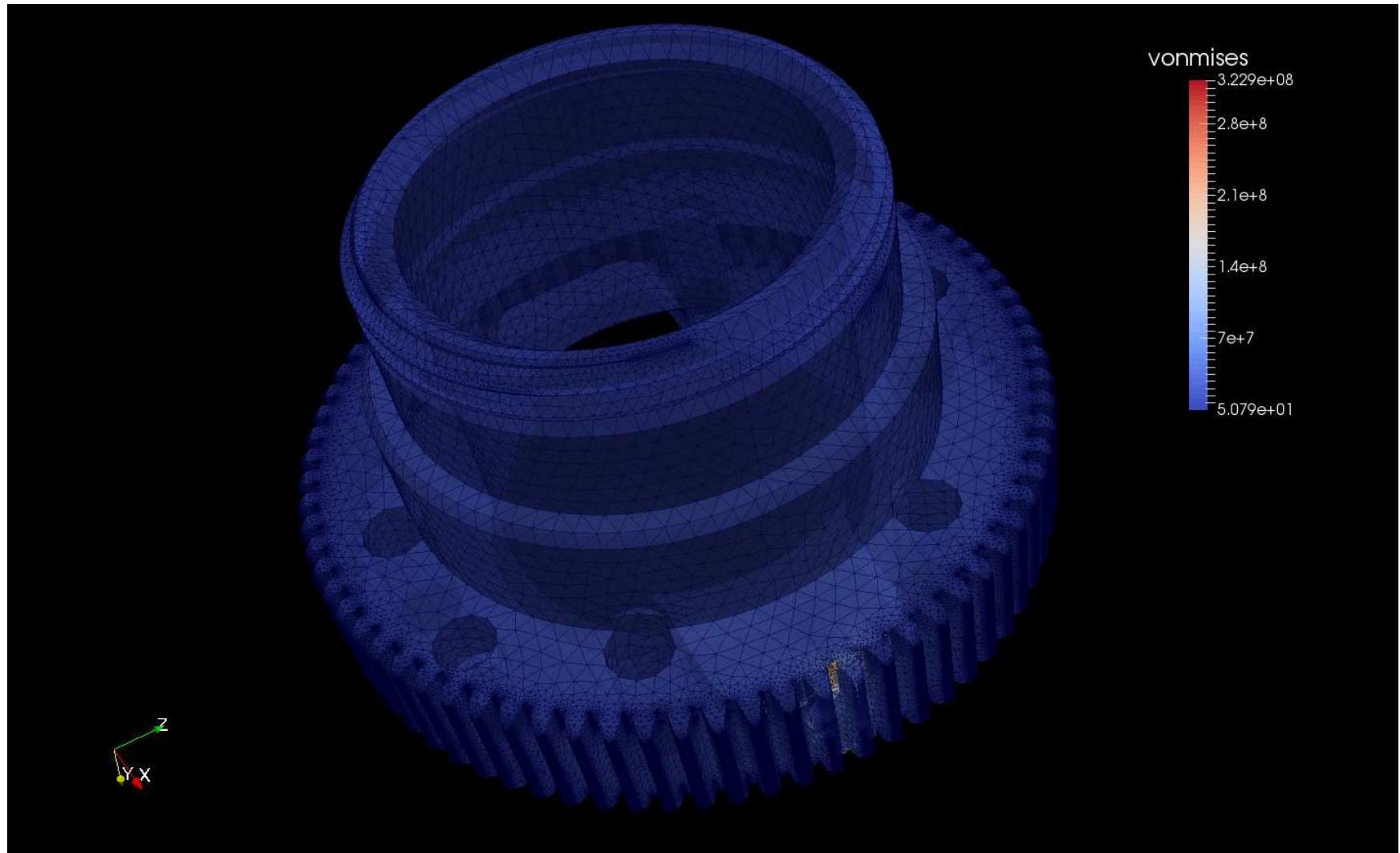
- Natural Convection (Elmer) 



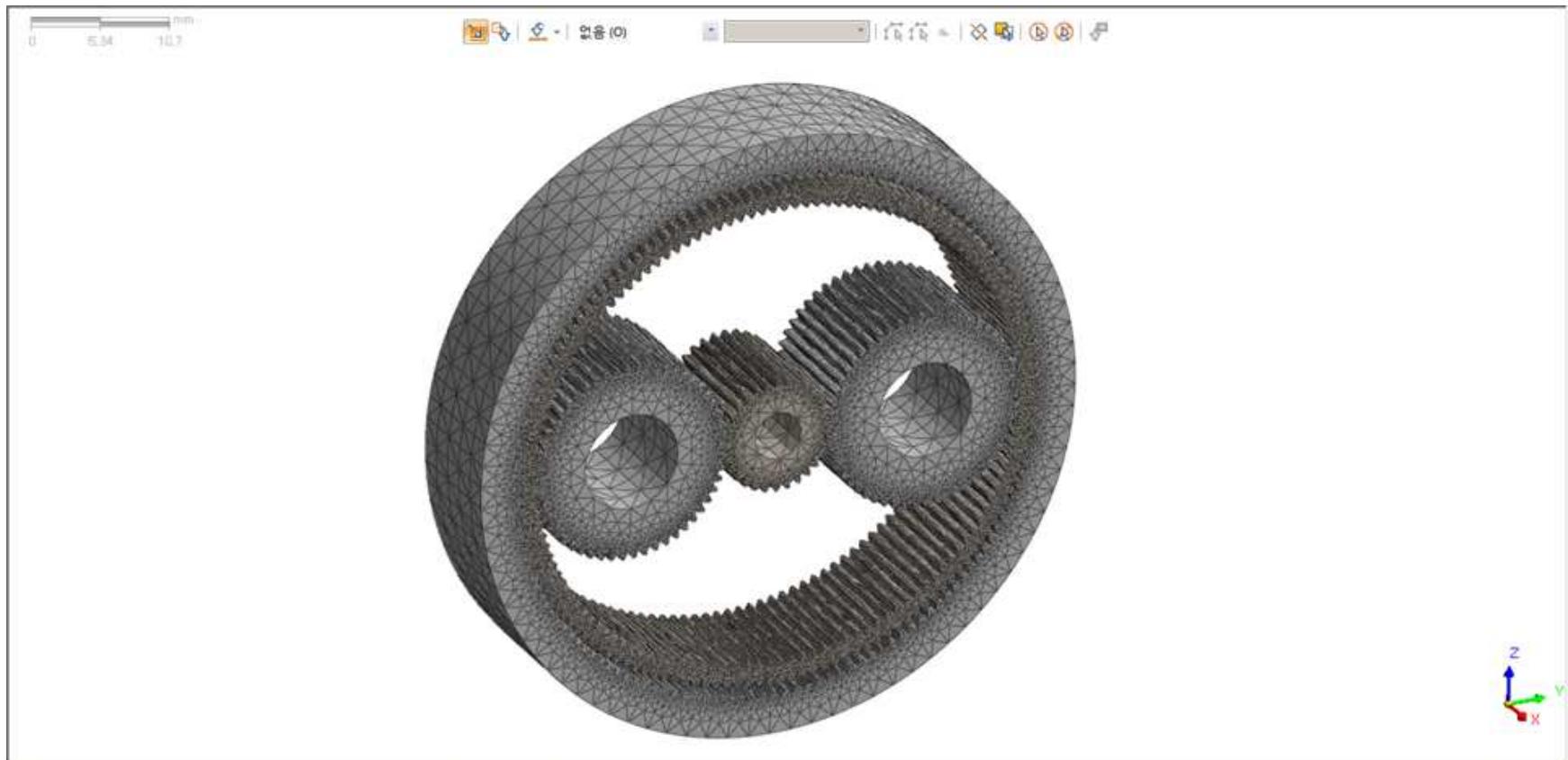
- Karman Vortex (Elmer) 



- Gear Stress (Elmer) 



- Harmonic Drive Gear Stress (MidasNFX) 



# **PDM / PLM / VCS / Automation**

*based on OpenSource Solutions*

## • ProtoPLM (PLM)

The screenshot shows the ProtoPLM - Bill of Materials interface. At the top, there are several tabs: osboxes@bang:~/git/..., reveal.js, Google 캘린더 - 2018년 ..., Essay.md - ~/git/My..., README.md (~/git/My...), and ProtoPLM - Bill of Mater... The current tab is ProtoPLM - Bill of Materials. The address bar shows the URL: 192.168.2.11/repo/7674/bom?bom\_type=indented&output=html&item\_id=58ff284c8072924ff32feee3&col\_0=on&col\_5=on&col\_1=on&col\_6=on&col\_2=on&col\_7=on&col\_8=on&col\_13=on. The date in the top right corner is 20180518 금 15:27.

The main content area is titled "Detailed Bill of Materials". It includes a legend for column selection:

<input checked="" type="checkbox"/> line_number	<input checked="" type="checkbox"/> description	<input type="checkbox"/> DESIGNER
<input checked="" type="checkbox"/> qty	<input checked="" type="checkbox"/> TYPE	<input type="checkbox"/> CHECKER
<input checked="" type="checkbox"/> item_number	<input checked="" type="checkbox"/> DESCRIPTION	<input type="checkbox"/> DIVISION
<input type="checkbox"/> revision	<input checked="" type="checkbox"/> MATERIAL	<input checked="" type="checkbox"/> SUPPLIER
<input type="checkbox"/> phase	<input checked="" type="checkbox"/> TREATMENT	<input type="checkbox"/> UNIT_PRICE

Below the legend, there is a text input for "Expand hierarchical BOM through [99] levels, top-level quantity [1]".

A "Generate BOM" button is followed by "for H1000001 revA unreleased A\_LPL2\_KOREA".

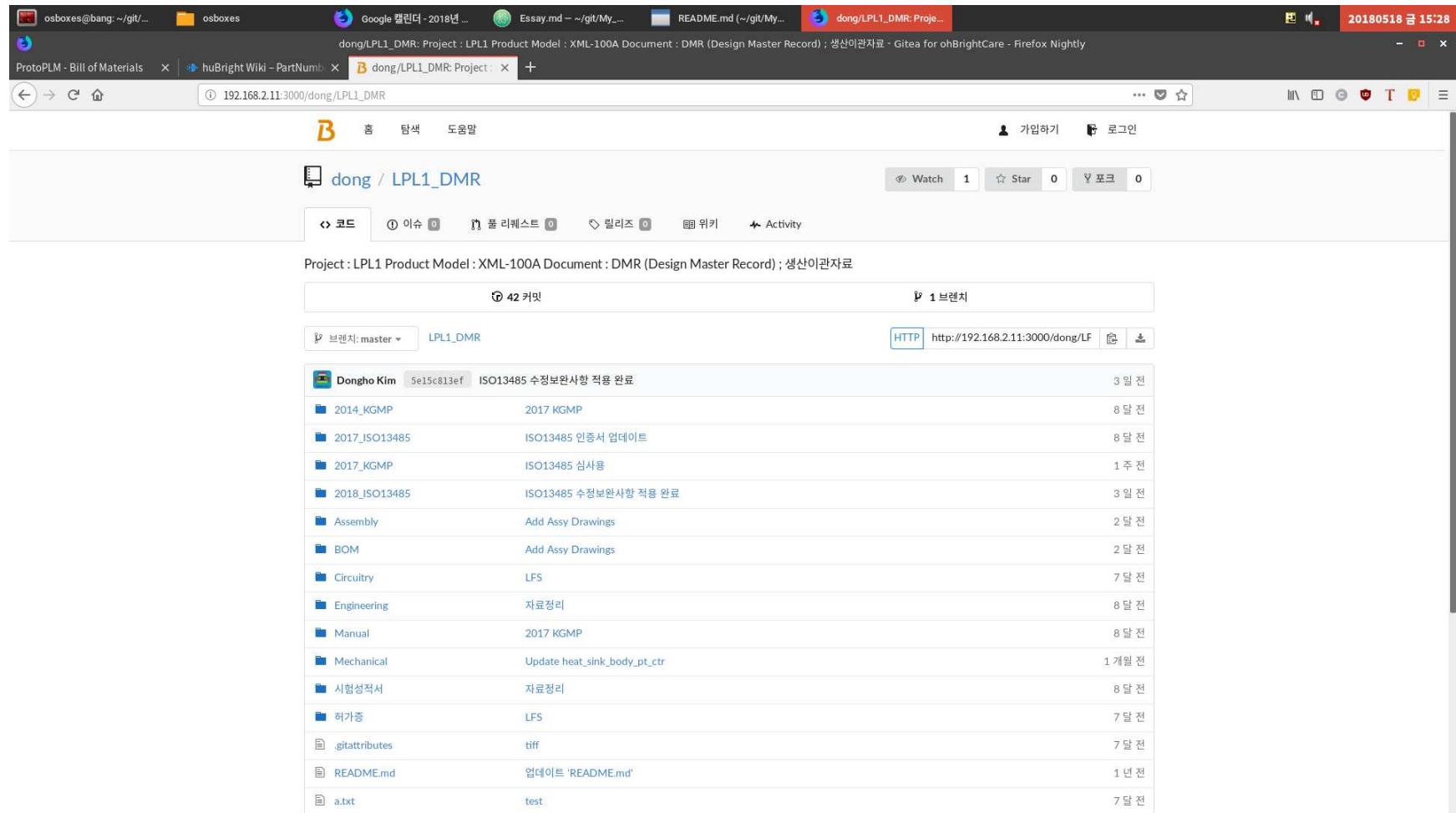
Text below the button says: "These results are also available as: [csv] [tab-delimited] [xls]".

The bottom section displays a table of the generated Bill of Materials:

line	qty	item_number	description	TYPE	DESCRIPTION	MATERIAL	TREATMENT	SUPPLIER
1	1	H1000001	A_LPL2_KOREA					
2	1	H2000001	A_LPL2					
3	1	H2000002	A_LPL2_BASE					
4	1	H2000151	A_LPL2_BASE_LEG					
5	1	H3000001	M_LPL2_BASE_LEG	PART	Aluminium Casting	ALDC12	Sanding, Powder Coating	화룡조명
6	2	H3000002	B_SUP0_1M-HP52-02-63-313	PART	Caster Wheel, No Brake	Urethane etc.	-	화룡조명
7	2	H3000003	B_SUP0_1M-HP52-02D-63-313	PART	Caster Wheel, Brake	Urethane etc.	-	화룡조명
8	1	H2000132	P_LPL2_CABLE_B	ASSEMBLY	-	-	-	하이디시큐리티
9	1	H3000035	E_IEC-INLET_SCREW	PART	IEC-60320 C14 Inlet, Screw Type	-	-	-
10	2	H4R03008	B_RDBOLT_M3X8L	PART	B_RDBOLT_M3X8L	Steel	-	-

Developed with Perl & MongoDB

## • Gitea (VCS)



Developed with Go Lang

## • JingoWiki (Wiki)

The screenshot shows a Firefox browser window with several tabs open. The active tab is 'huBright Wiki - PartNumber' at the URL [192.168.2.11:3100/wiki/PartNumber](http://192.168.2.11:3100/wiki/PartNumber). The page content is as follows:

**PartNumber**

**규칙 문서**

[http://192.168.2.11:3000/dong/DJDMP/raw/master/PLM,ERP/DJDMP\\_RULE\\_ERP\\_CODE.pdf](http://192.168.2.11:3000/dong/DJDMP/raw/master/PLM,ERP/DJDMP_RULE_ERP_CODE.pdf)

**공용부품**

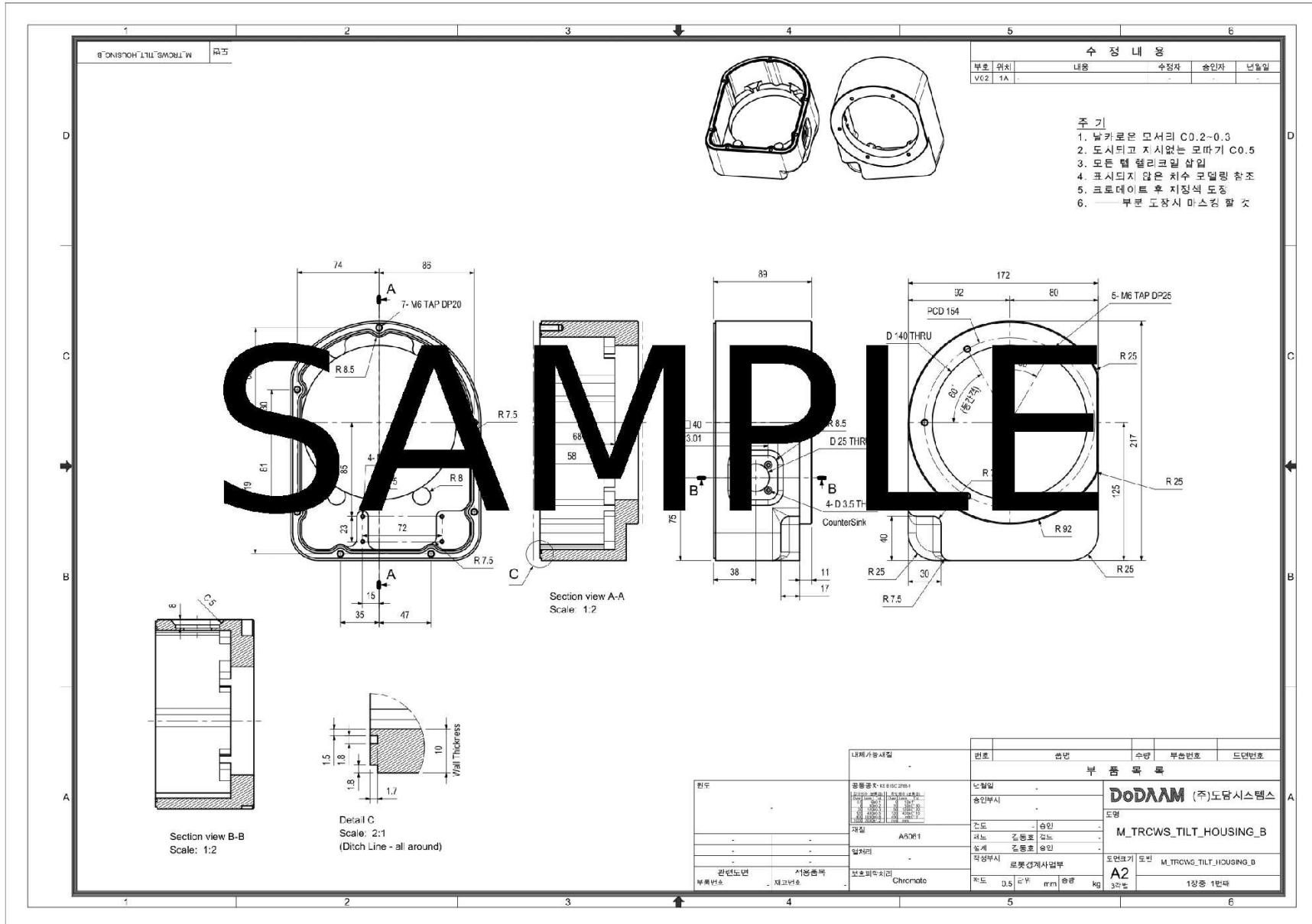
1	2	3	4	5	6	7	8
H	4	x	y	y	y	y	y

- 1,2째자리(H4) : 고정 (헬스케어사업부, 부자재)
- 3째자리(x)

기호	설명	규격
R	Round Head Screw	
C	Counter Sink Screw	
W	Wrench Bolt	
G	Counter Sink Wrench Bolt	
K	Ultra Low Head Wrench Bolt	<a href="https://us.misumi-ec.com/vona2/detail/110302280540/">https://us.misumi-ec.com/vona2/detail/110302280540/</a>
H	Hex Head Bolt	
S	Set Screw	
N	Nut	
B	Bearing	
E	E-Ring	
T	Retainer Ring Shaft	
L	Retainer Ring Hole	
A	Plane Washer	
D	Spring Washer	

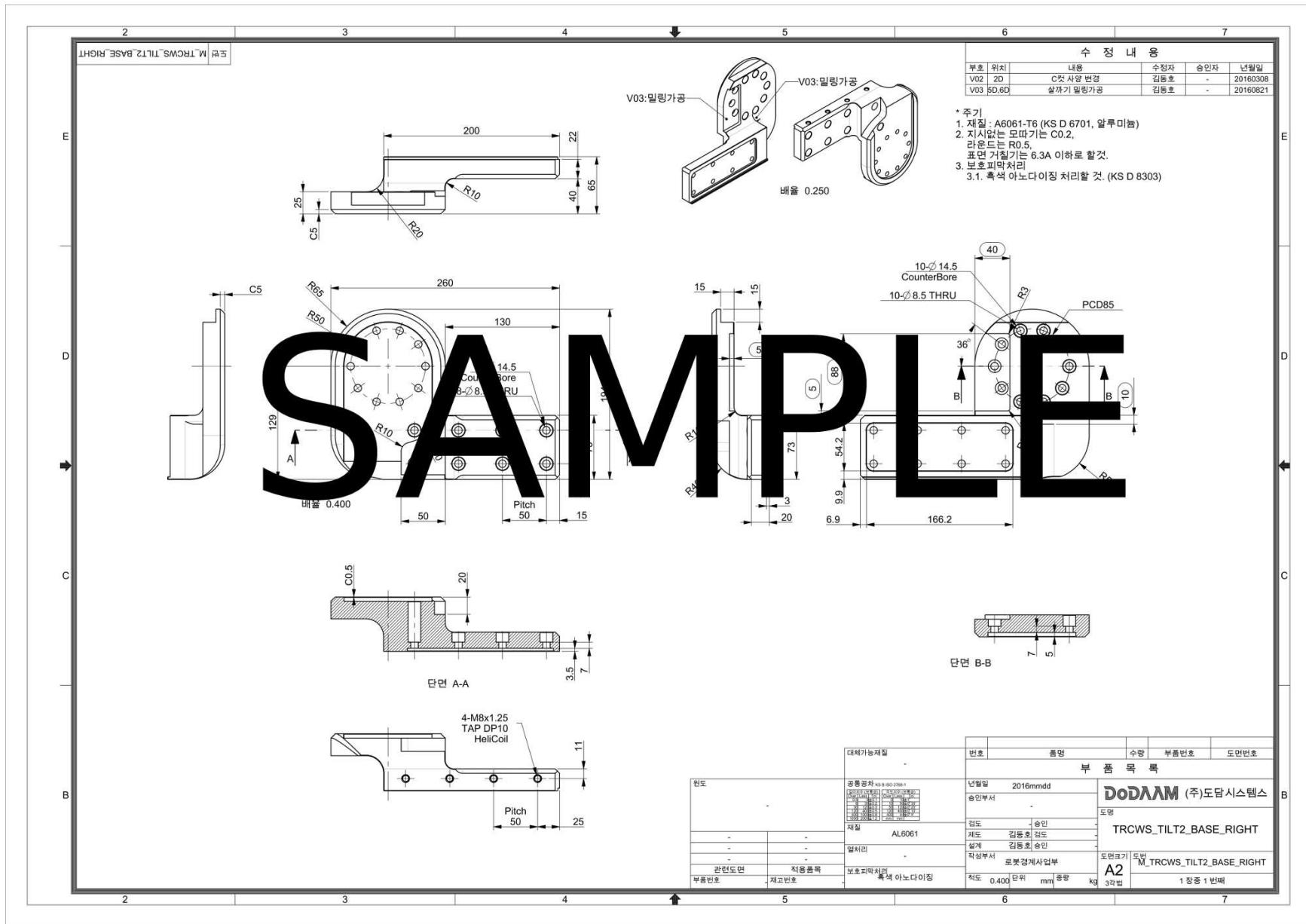
Developed with Node.js, Markdown & Git

- CATIA autosetup



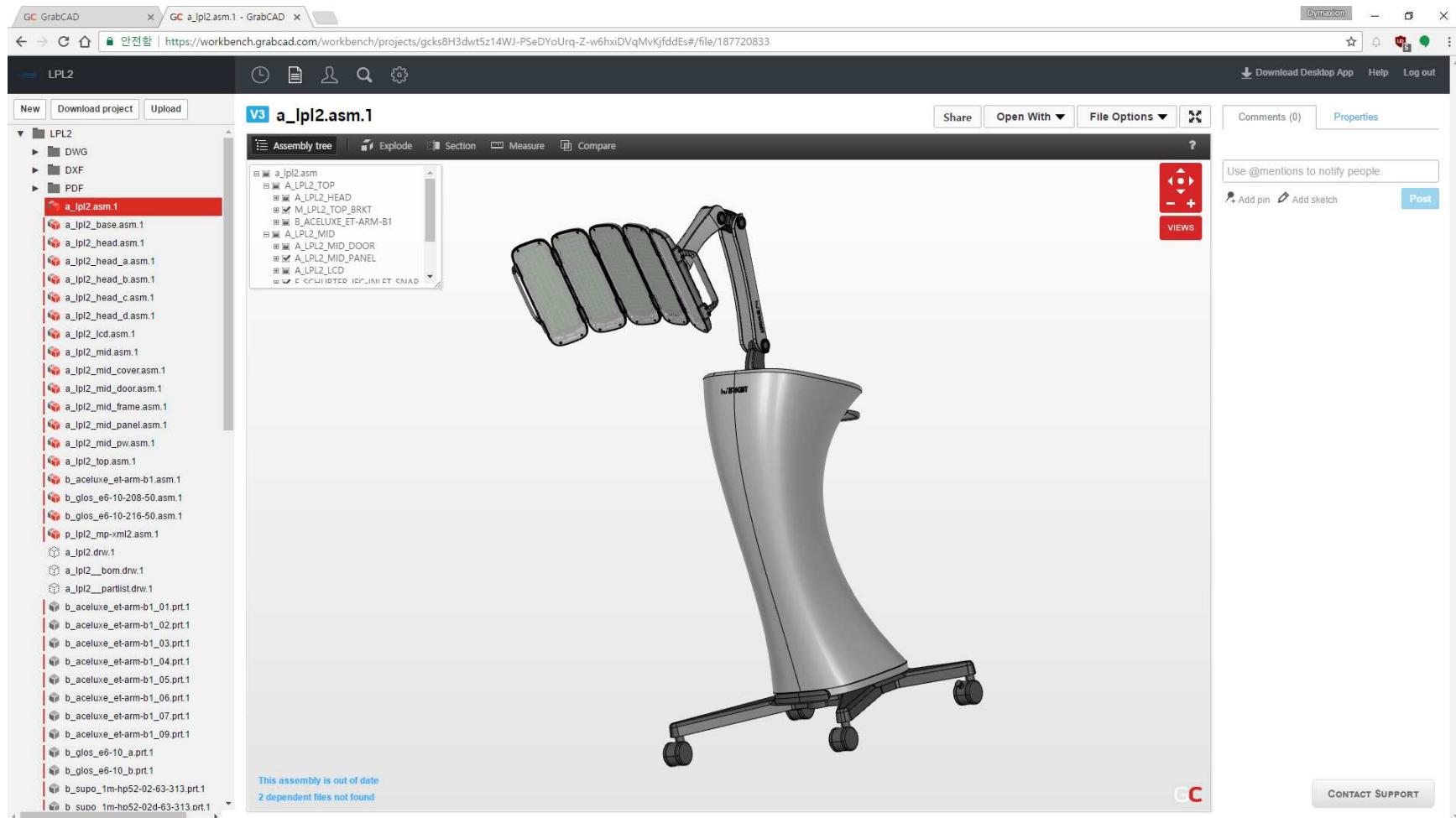
# Batch Script

- PTC CREO autosetup



## Context Menu, Batch Script

- GrabCAD Workbench (PDM)



Based on SVN

# *Take this technical superiority!*

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