

A case study in adopting Fusion 360 Hockey Skate Adapter



Edward Eaton
Sr. Industrial Designer
Co-Principle
DiMonte Group

11.17.2016

Class summary

A longtime SOLIDWORKS user (me!) shares his experience with diving into Fusion 360 to design something to help a kid...

..and share what I learned on the way.

Learning Objectives:

- Understand the transition between SolidWorks and Fusion 360—and how the Fusion 360 Design Team makes that easier.
- Learn how to use 3D scan data in Fusion 360 (bottom line—it rocks!)
- Discover the power of T-Splines, and the intuitive interface for manipulating them implemented by Fusion 360.
- Never forget that you are a designer first, not a CAD jockey—don't let the tools keep you from making the best possible design.
- Collaboration and Fabrication Opportunities

A little more background about me...



We are dedicated to giving back to the community...

Chicago Blackhawks Special Hockey
Dedicated to providing children and adults with developmental disabilities the opportunity to play hockey

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Upcoming Events

- **Spring Fling - All CBSH Skaters @ McFetridge**
April 3, 2016 at 3:15 pm – 4:15 pm
McFetridge Sports Center,
3843 North California Avenue,
Chicago, IL 60618, United States
- **National Disabled Festival in Detroit, MI**
April 7, 2016 – April 10, 2016

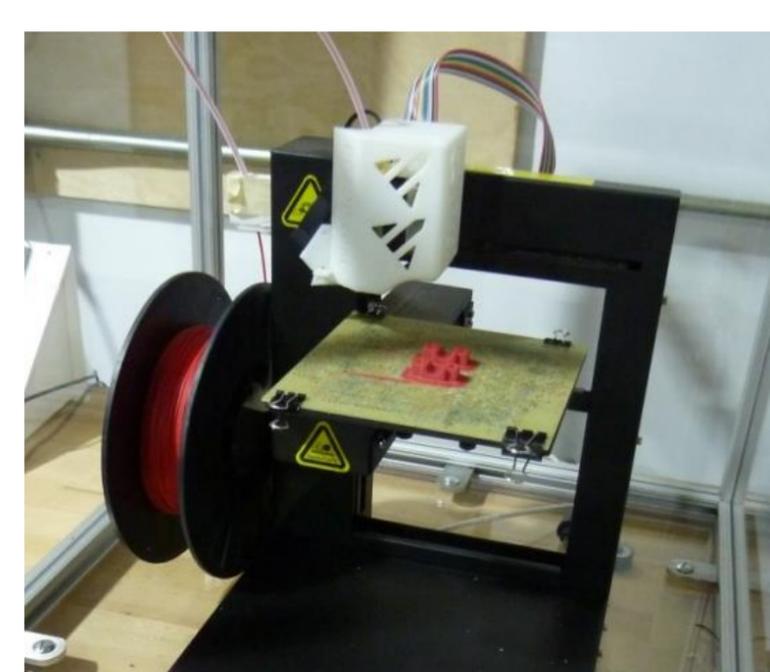
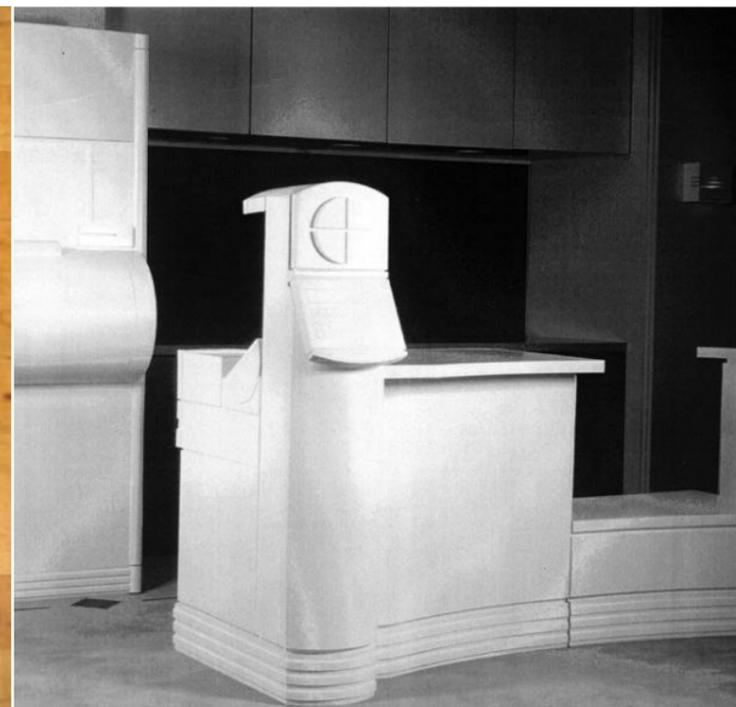
CBSH Annual Banquet
March 14, 2016
Hosts: Alice & Tom Lewaniak – Chicago Blackhawk Special Hockey Location: Empress Banquets, 200 E Lake St, Addison, IL When: Friday, April 15, 2016 – 6:30PM Phone: 630-620-4231 Suits and Tie suggested Cash Bar Available Music and dancing will be provided. Meal Choices: Chicken Francaise Veggie Lasagna Gluten Free Dinner Chicken Tenders and Fries (for players & kids...
[Read more →](#)

Thank you Mike Svac and the Warrior Hockey Club
March 8, 2016

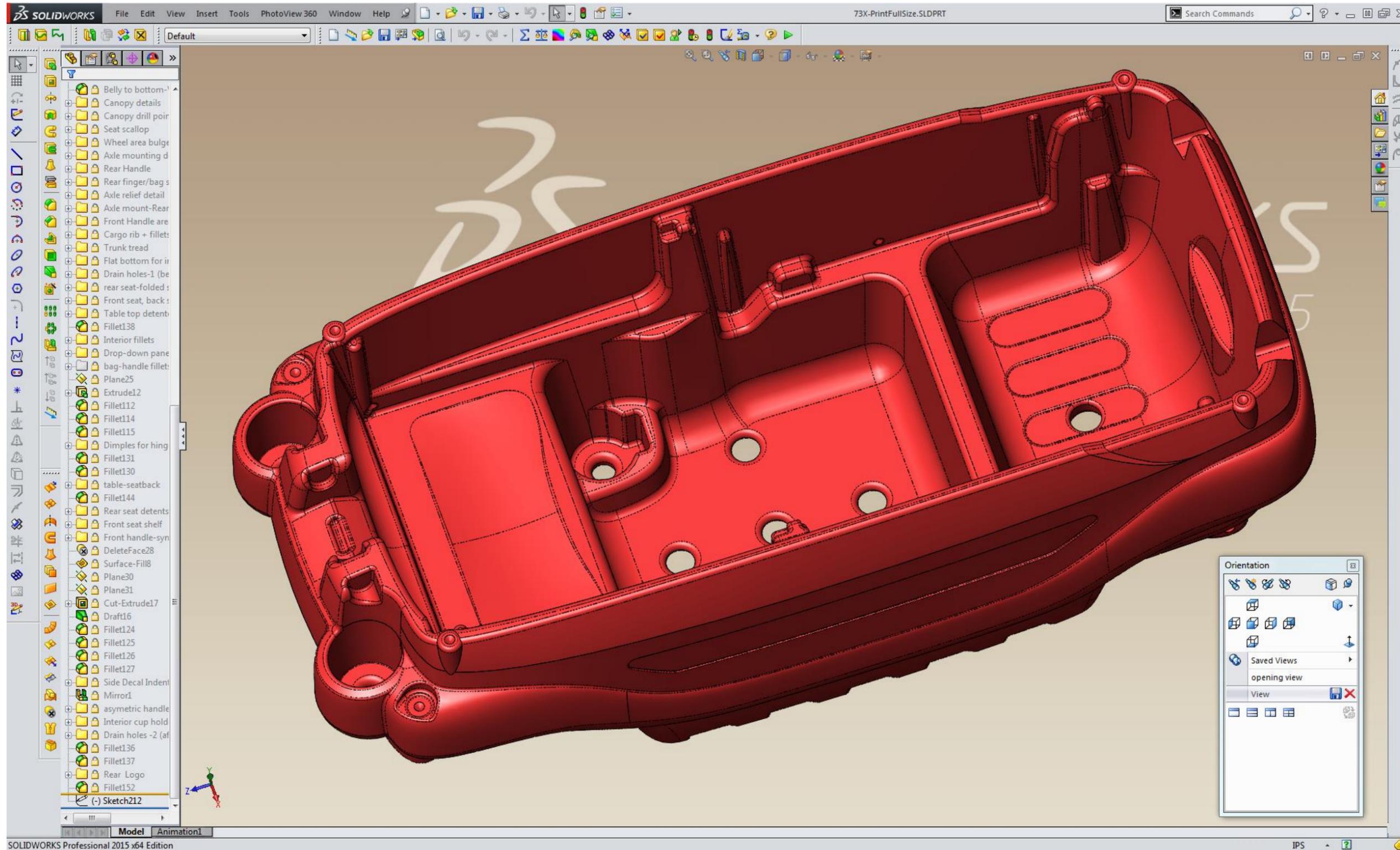


<https://chicagospecialhockey.com/>

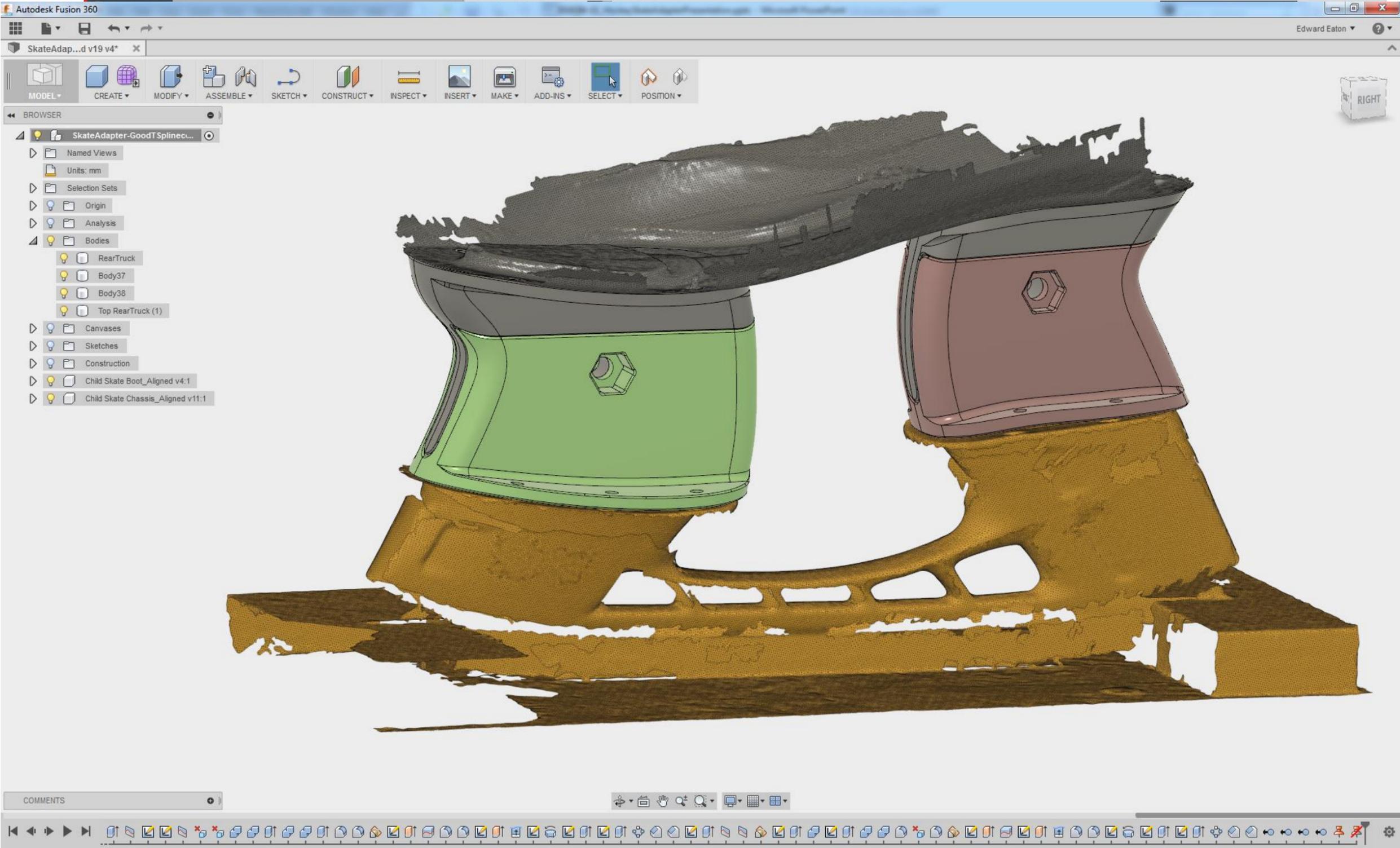
We have all sorts of cool resources...



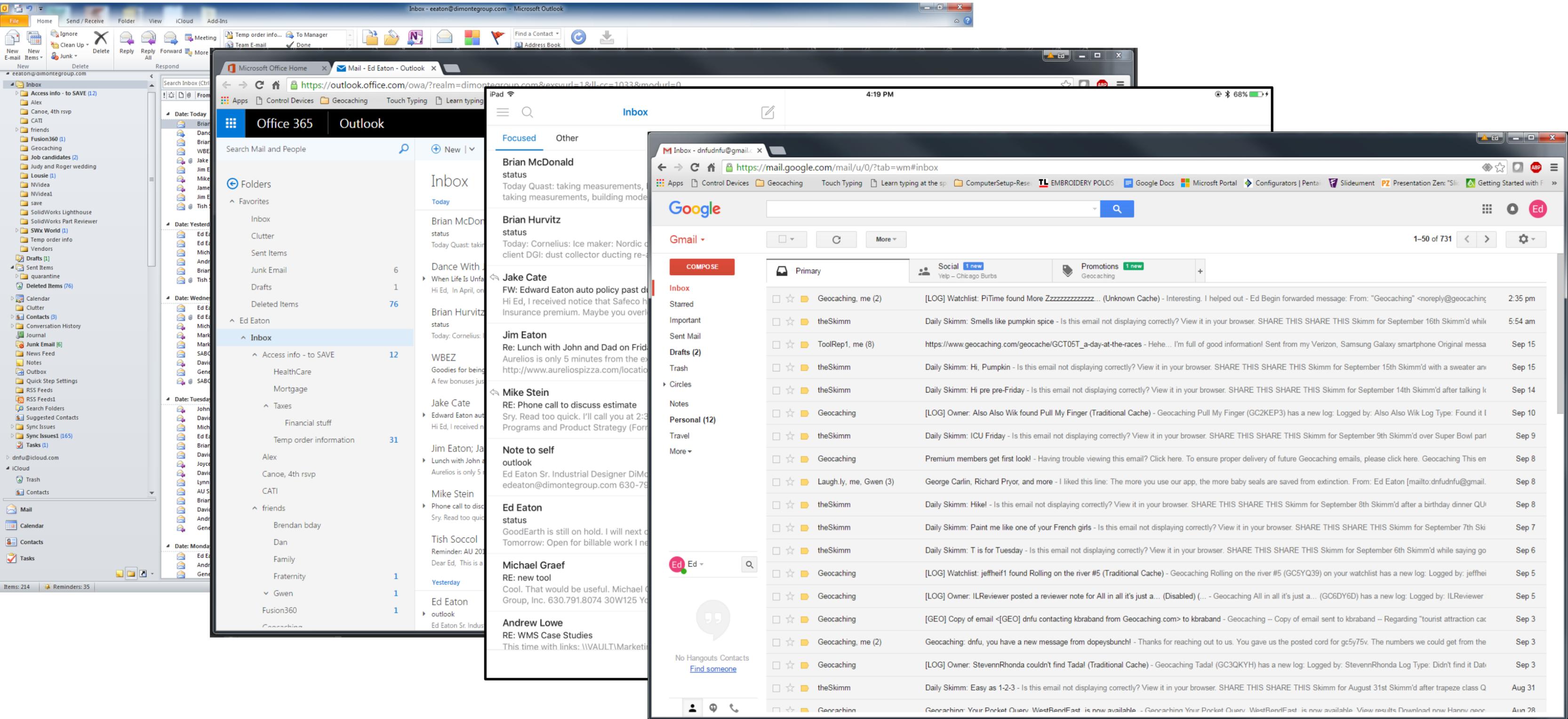
And we have cool software...



But... we also have other cool software...

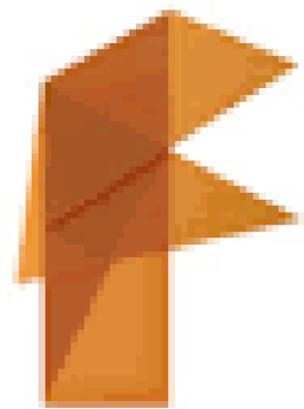


I hate learning other software that does the same thing



To find out just *how cool* a software package is....

...you have to pull off the band-aid! And it's going to take some



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FUSION 360™

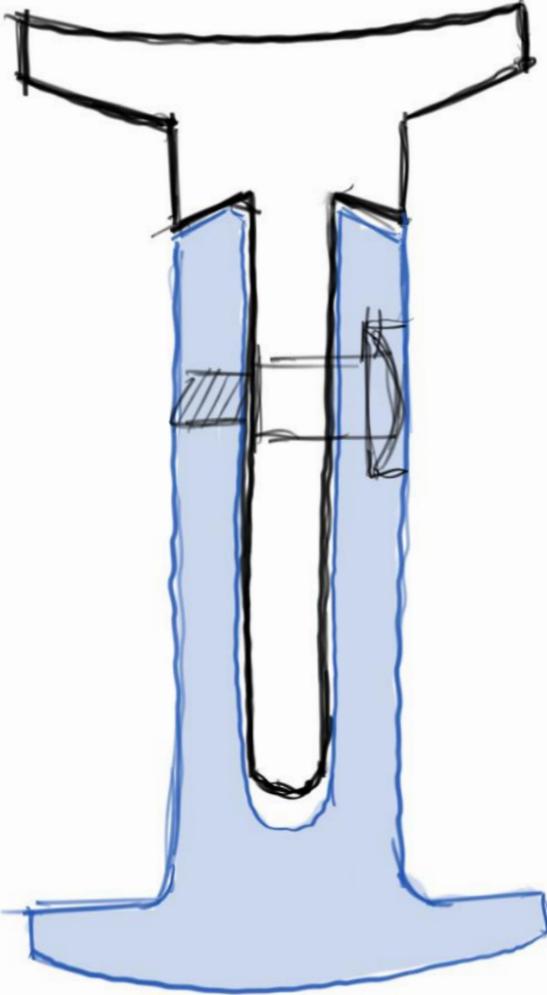
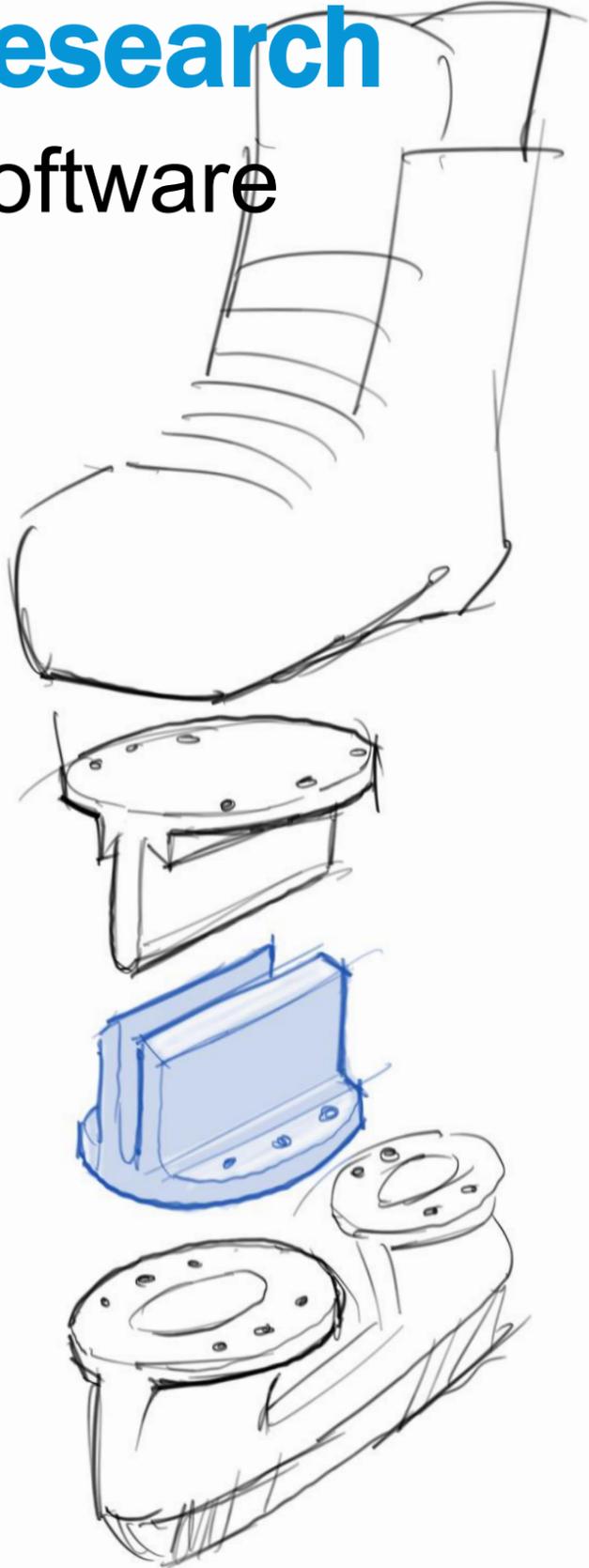
The project



<https://chicagospecialhockey.com/>

Do a REAL job... which starts with research

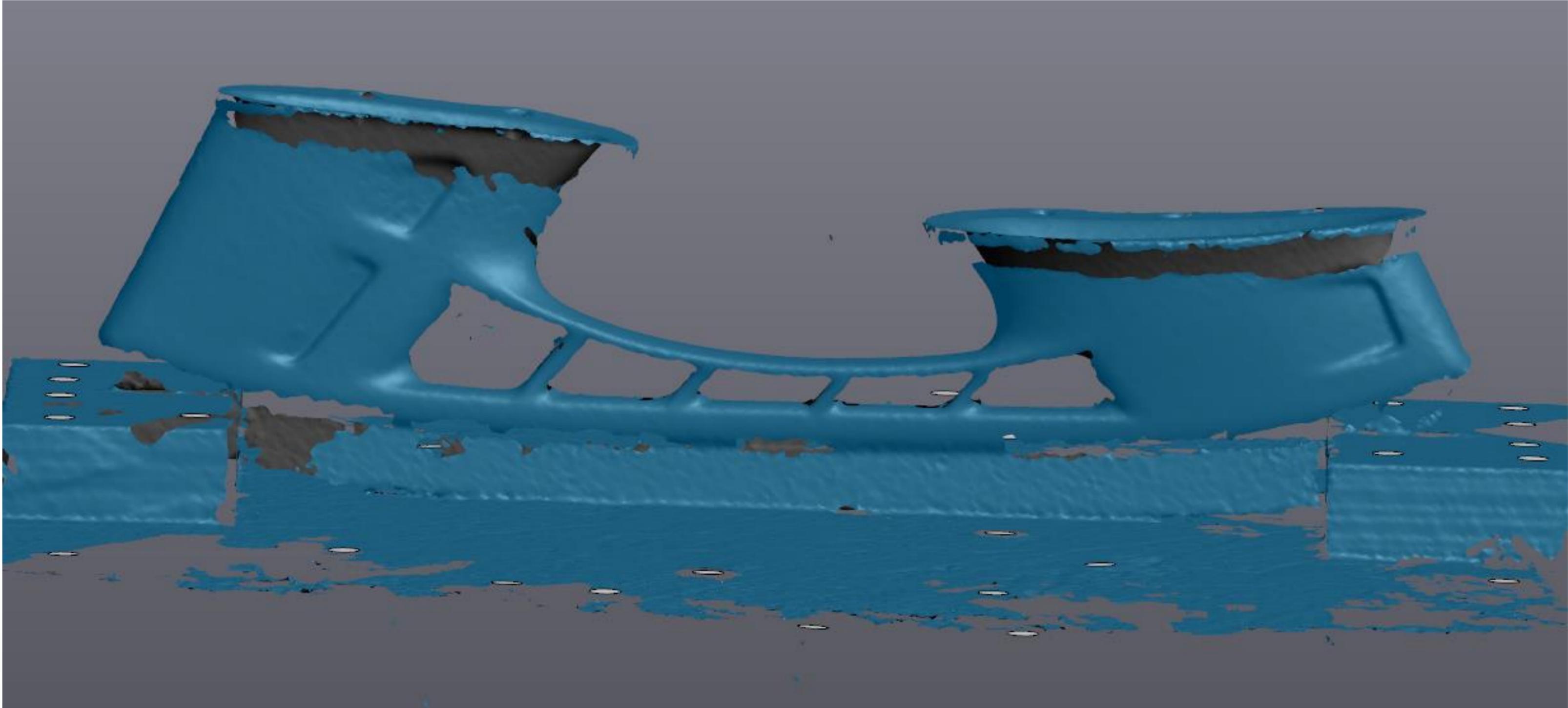
I DO NOT believe in “playing around” with software



3D scanning – Let's do something HARD



Armed with the 3D scan, what was that next step?



Navigation icons: Grid, File, Save, Undo, Redo

File name: Untitled

MODEL ▾

SKETCH ▾

CREATE ▾

MODIFY ▾

ASSEMBLE ▾

CONSTRUCT ▾

INSPECT ▾

INSERT ▾

MAKE ▾

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SELECT ▾

BROWSER

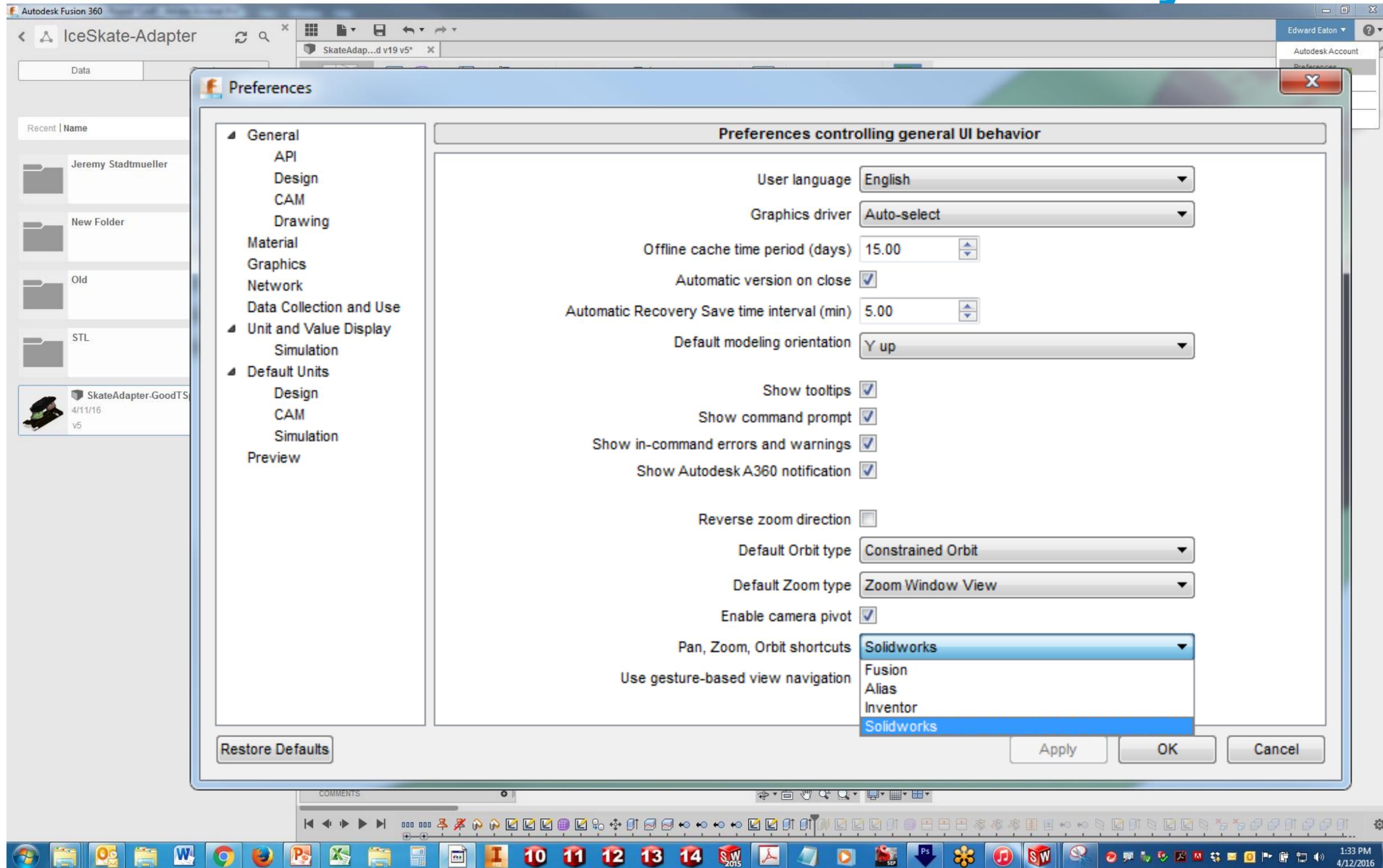
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Named Views

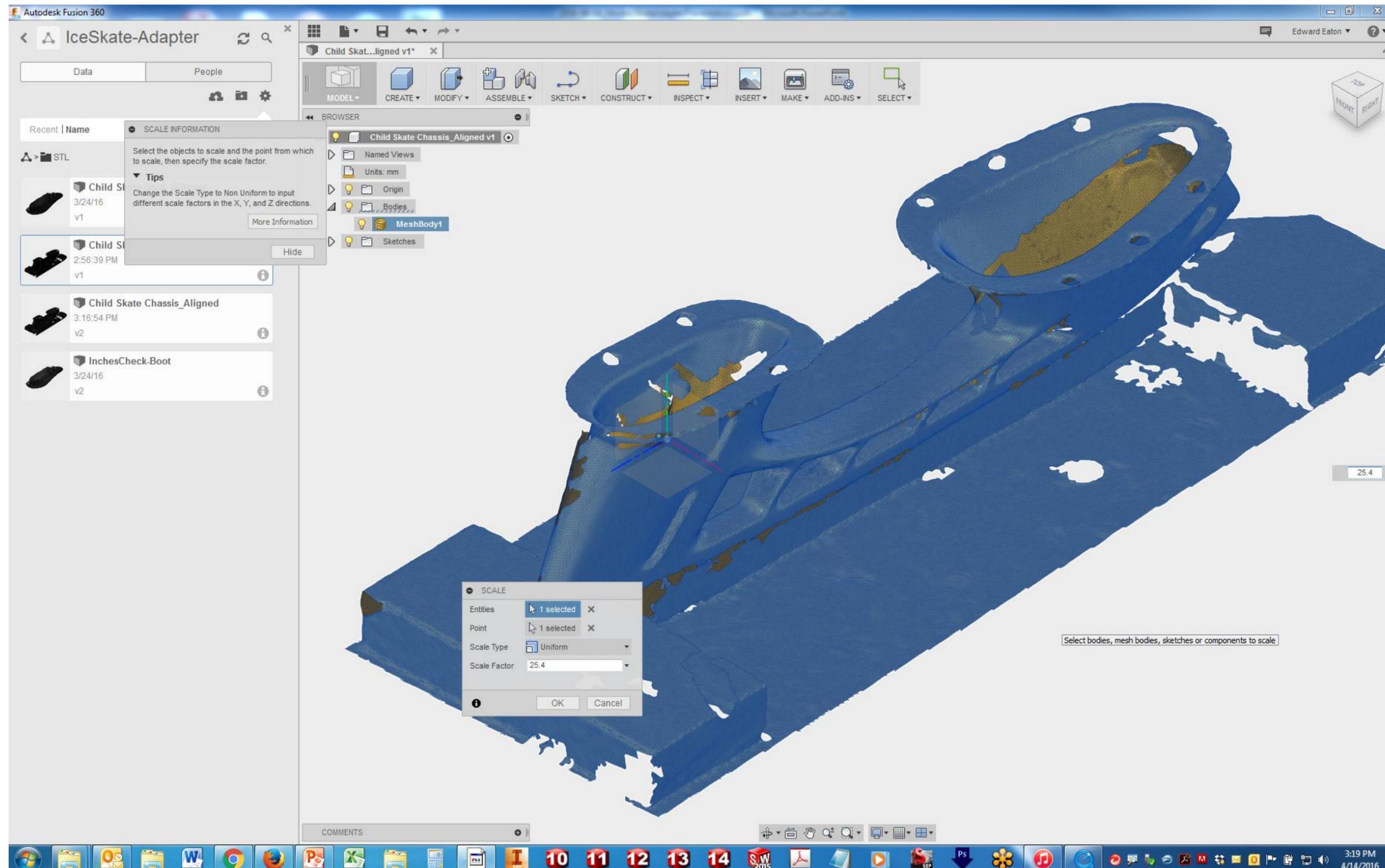
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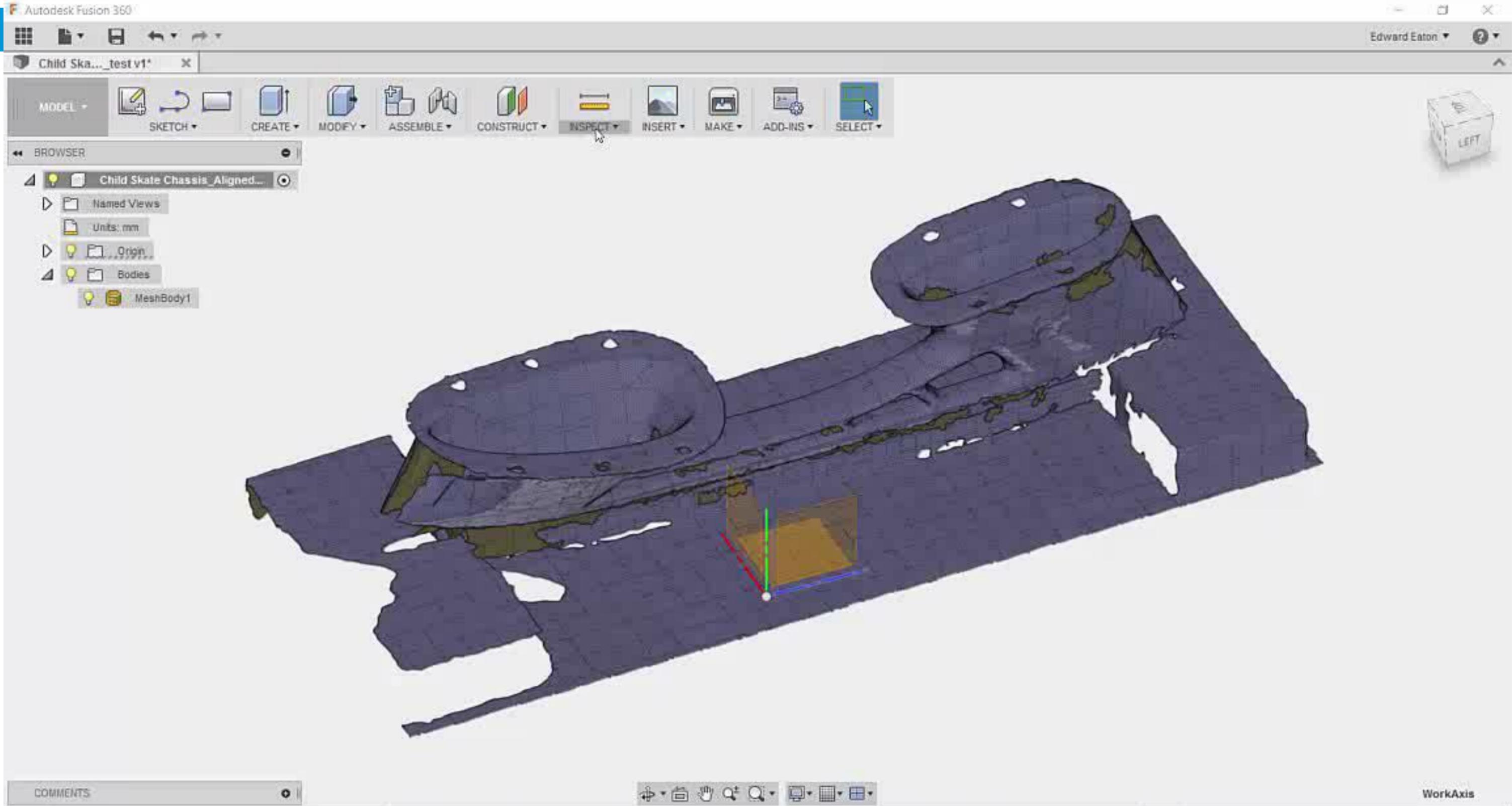
Origin

Fusion 360 - SOLIDWORKS user friendly

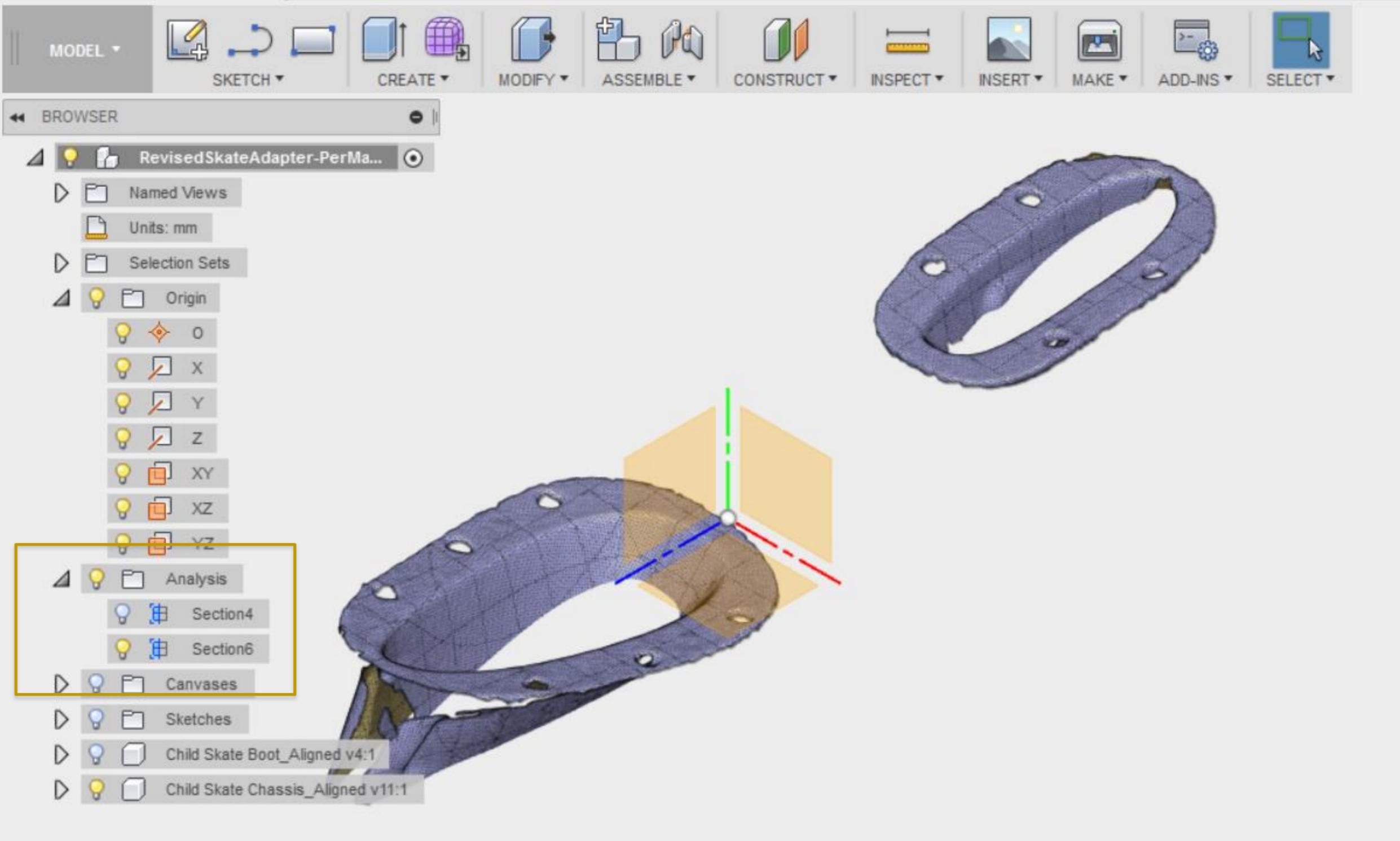


When **barely** comfortable – push for the harder bit

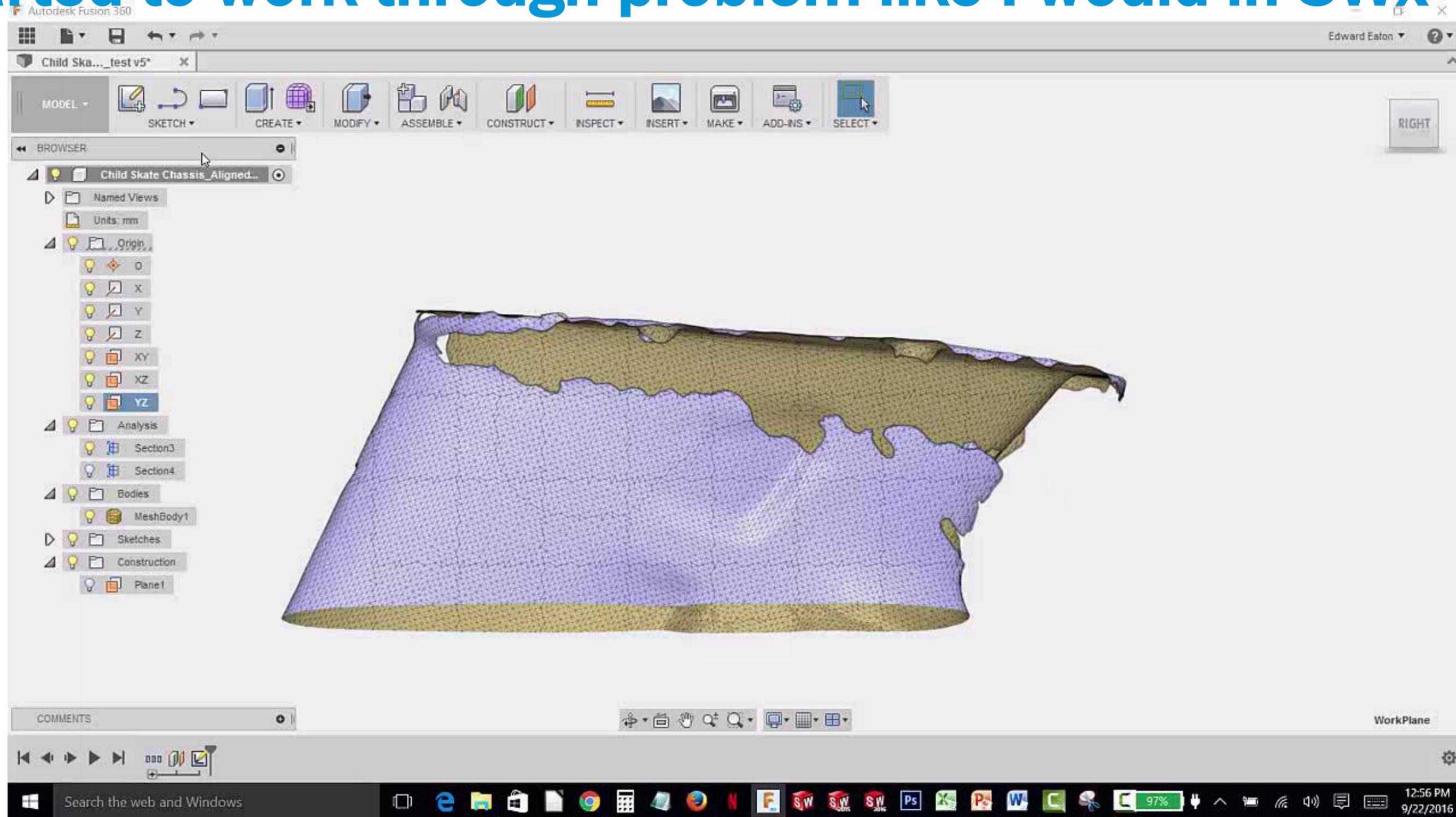




But how do I get out of section???

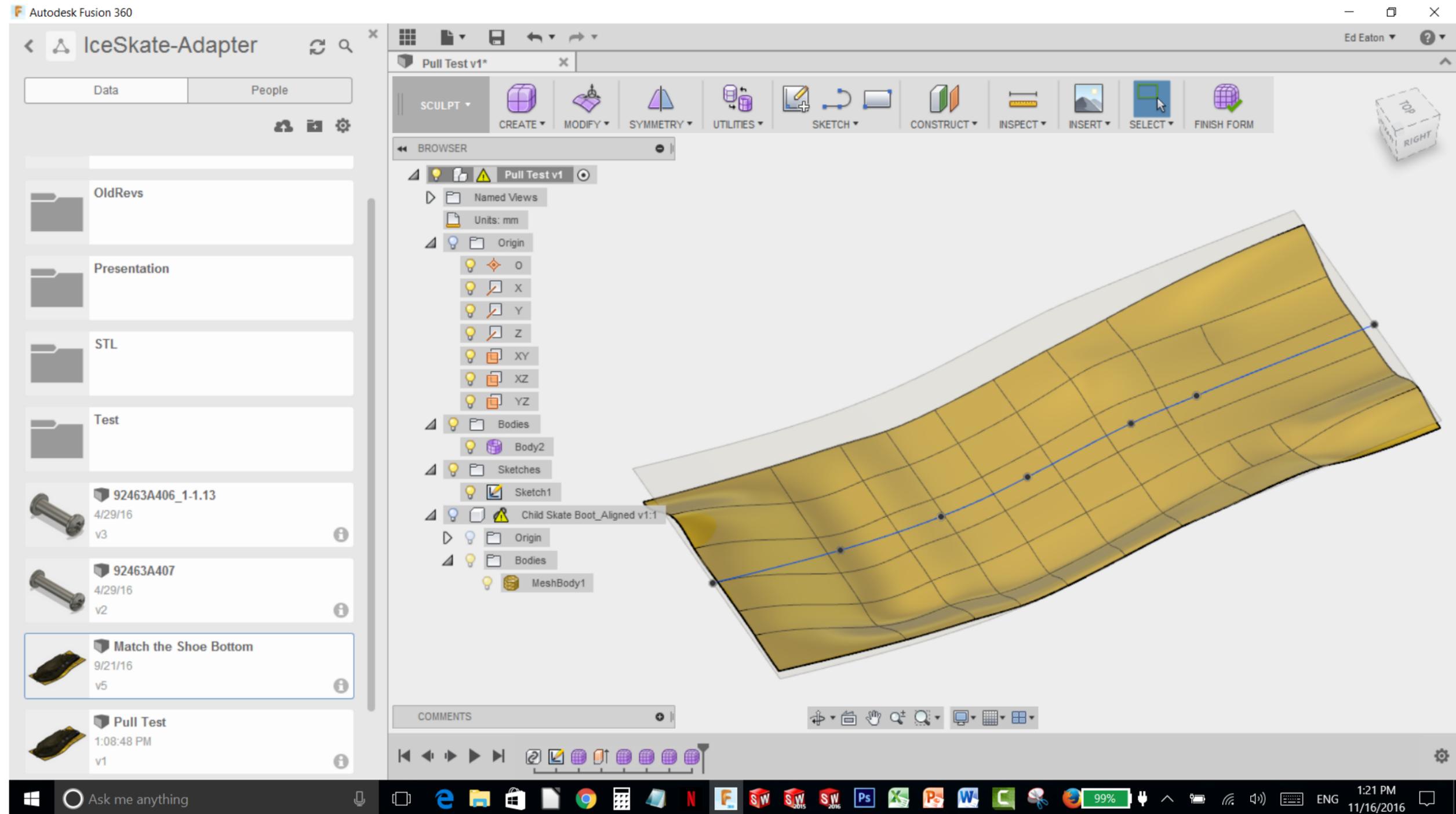


Started to work through problem like I would in SWx



Remember, computers aren't designers (yet)

<http://www.instructables.com/id/Fusion360-Snapping-a-T-spline-Form-to-3D-Mesh/>



Free Training Re

Learn Fusion 360 in 60 M x

www.autodesk.com/products/fusion-360/learning-tutorials

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Class IDPD20476

Transform your Approach to Product Development with Fusion 360

Ed Eaton
DiMonte Group, Inc.

Learning Objectives

- Understand the transition between SolidWorks and Fusion 360—and how the Fusion 360 Design Team makes that easier.
- Learn how to use 3D scan data in Fusion 360 (bottom line—it rocks!)
- Discover the power of T-Splines, and the intuitive interface for manipulating them implemented by Fusion 360.
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Description

We've owned Fusion 360 software for a year. Projects that come into our company are commercial gigs, so we haven't been able to justify the learning time involved with using software new to us against a real-world design job's timeline. So, we just kept plugging along in SOLIDWORKS software. But it kept nagging at us that maybe Fusion 360 software could do the job better. We don't believe that you can "play" with new software and really evaluate it. You have to actually work with it toward a specific, focused, real-world goal with real-world consequences in order to gauge if it's a fit for your process.

In this presentation, we will discuss how we forced ourselves to jump into the deep end of Fusion 360 software on a project with very real ramifications. We designed a device for a boy with a physical deformity to enable him to get out on the ice and play hockey. This involved dealing with 3D scan data, matching complex surfaces to those scans, and then designing an enabling device that would finally help that boy to skate for the first time in his life. This session features Fusion 360.

About the Speaker

Ed Eaton is a Senior Industrial Designer and Principal of the DiMonte group. Located in Chicago's western suburbs, the DiMonte Group is a product development consultancy with expertise across a wide spectrum of industries and manufacturing processes. A high-level SOLIDWORKS user for over 18 years, Ed has developed an international reputation for sharing his critical and calculated use of the 3D tools employed by the DiMonte Group in the service of their clients.

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6 views 2 years ago

ision 360 you can take your idea from concept to creation all in one iment. Check out how Autodesk Fusion 360 users are turning their vision into

Fusion 360 | <http://autode.sk/11CfIDv>

RIBE | <http://autode.sk/11vxXeD>

OOK | <http://autode.sk/19jI15A>

ER | <http://autode.sk/19jJXc>

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Modeling Using Core Features 10:43

Freeform Modeling 9:51

4: Modeling Using Core Features Autodesk Fusion 360 21,536 views • 1 year ago

5: Freeform Modeling Autodesk Fusion 360 17,385 views • 1 year ago

Quickly get to an exceptional prototype



Success!



RE: Hockey Skate adapter status

George Martin <GeorgeMartin@Molson.com>

Sent: Wed 3/30/2016 9:16 AM

To: Gene DiMonte

Cc: [\[redacted\]](#)

Good morning, it looks great!

I cannot express my appreciation to everybody who has brought it to this point.

Thank you

George

George Martin
B&R International
Roseville, Illinois (Chicago)
phone 630-618-8877
fax 630-618-8888
George.Martin@Molson.com

From: Gene DiMonte [<mailto:Gdimonte@DIMONTEGROUP.COM>]

Sent: Wednesday, March 30, 2016 7:07 AM

To: [George Martin@Molson.com](#)

Subject: Hockey Skate adapter status

Hi George. We have been able to design, prototype and test the basic adapter for your son's images. We 3D printed our design and brought it over to B&R Sport on Tuesday to make sure

We have a couple of tweaks to make to it, and then we are going to turn it over to Autodesk, the final version for no cost. Should be about 2-3 weeks before we have it back and ready to

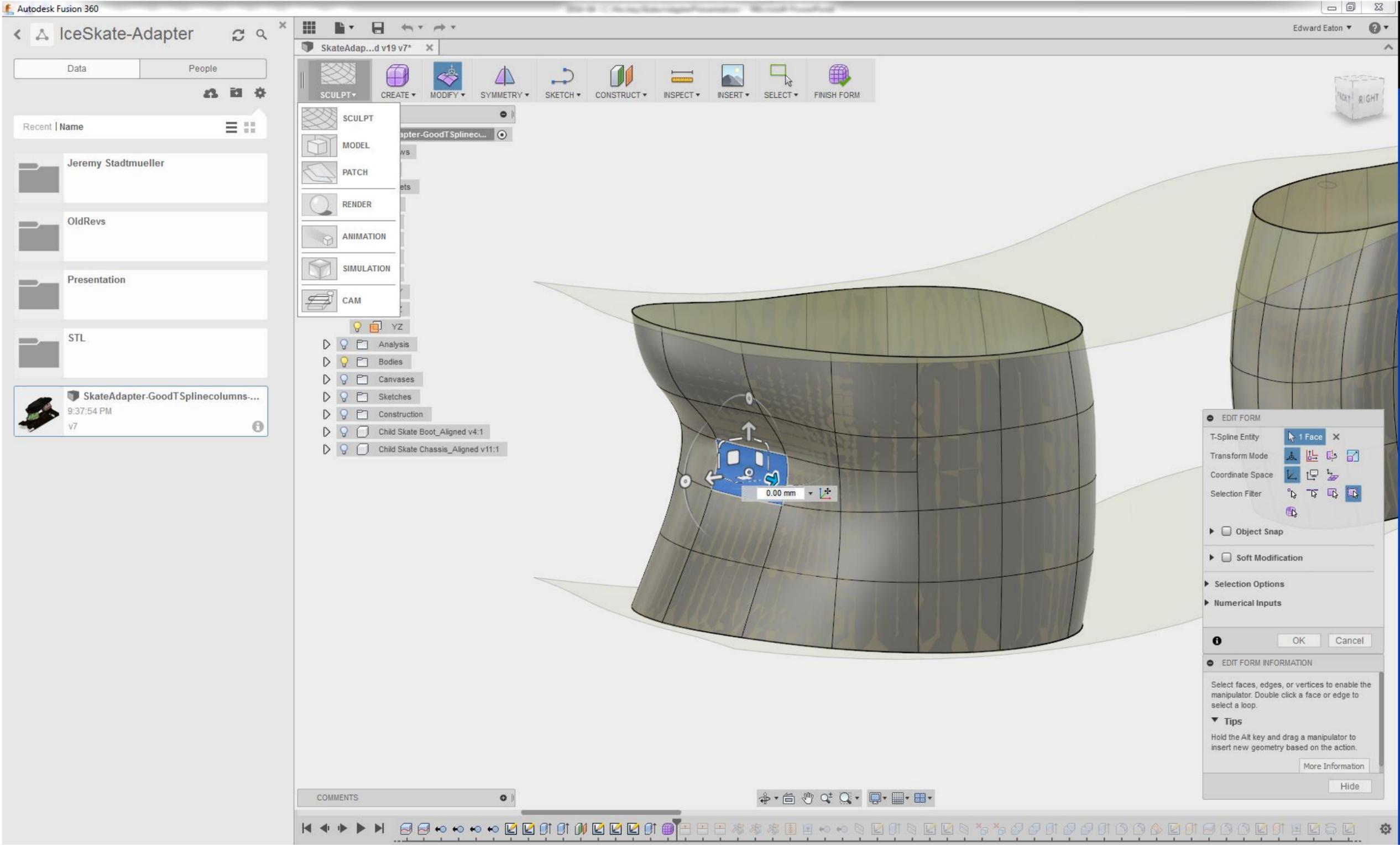
Regards,

Gene DiMonte
DiMonte Group Inc.
630-791-8074
www.dimontegroup.com

Success?

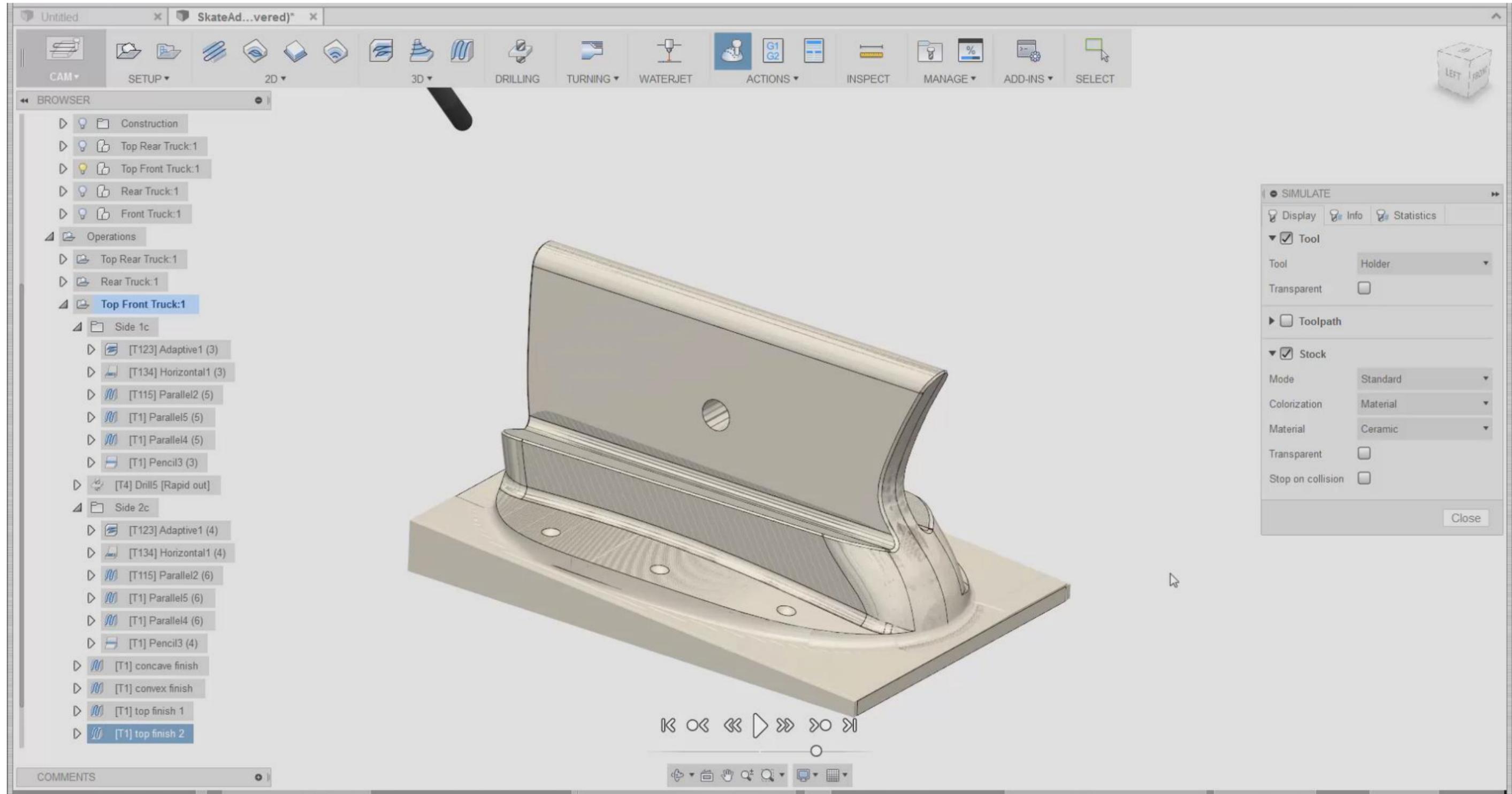


Parametrically updated the design

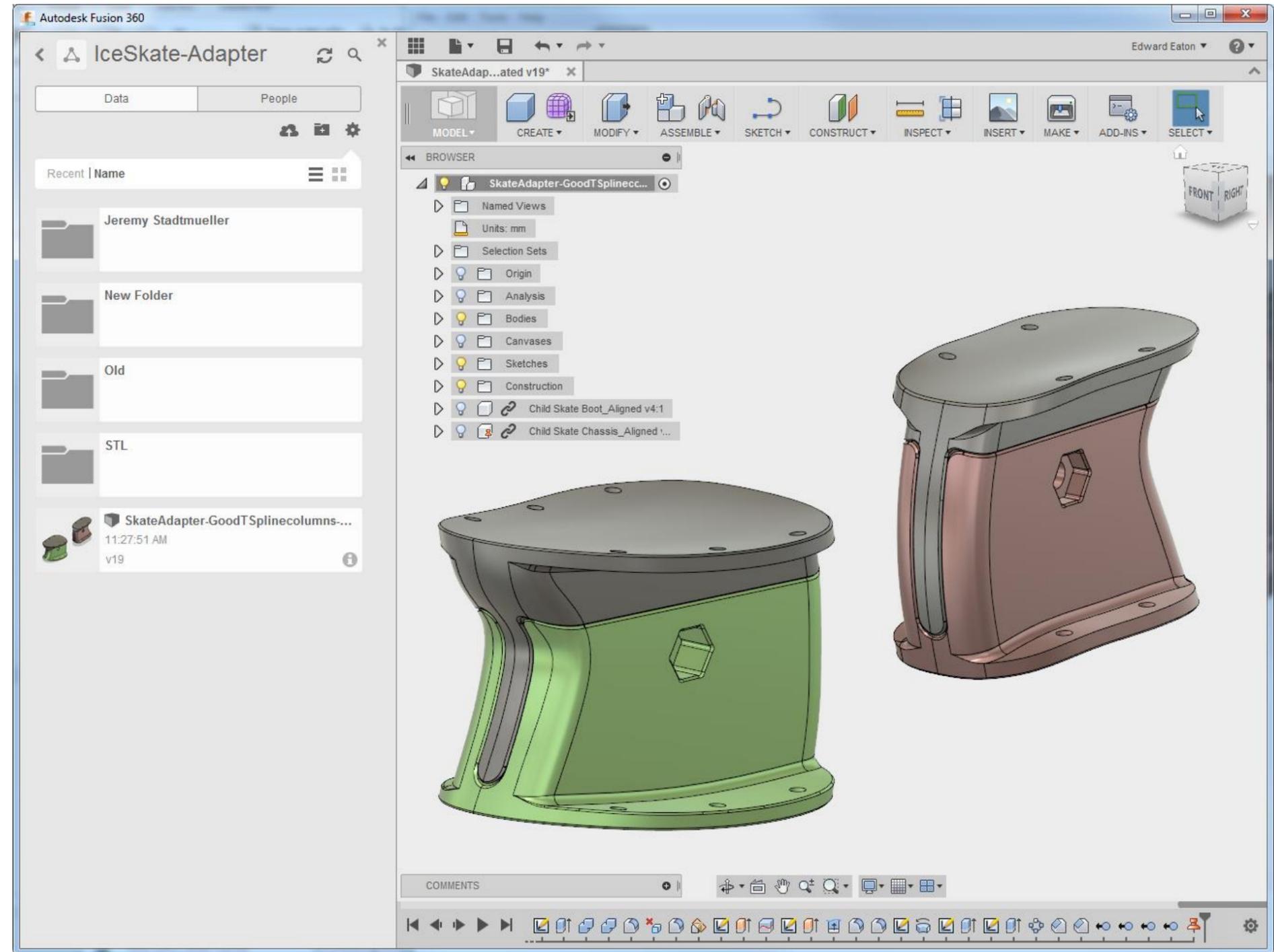
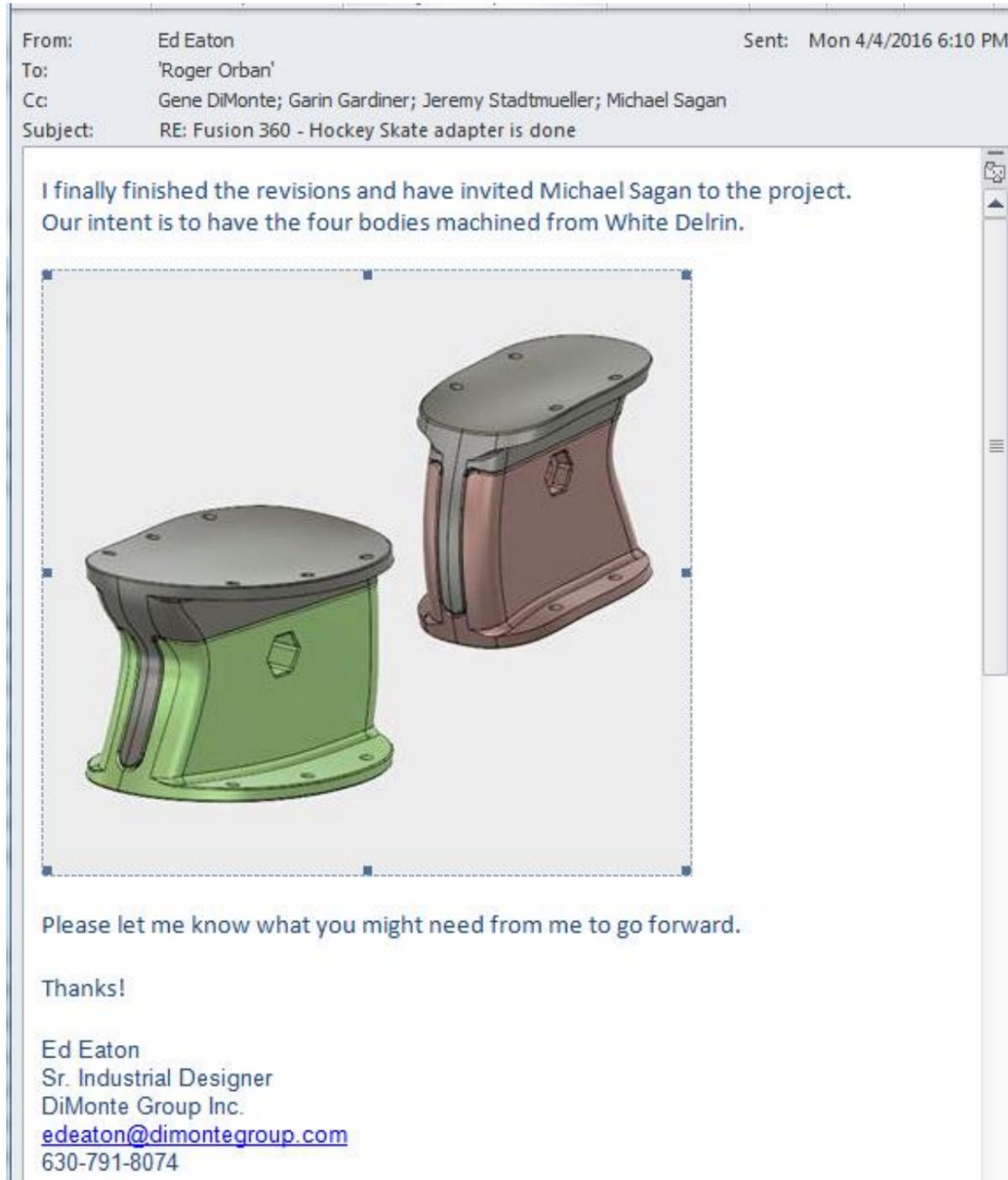




Now, to the most important part!



Last minute change



McMaster Carr

Autodesk Fusion 360

IceSkate-Adapter

Ed Eaton

92463A407 v2

You are all set with the latest update. Find out what's new.

SCULPT

CREATE MODIFY SYMMETRY UTILITIES SKETCH CONSTRUCT INSPECT INSERT SELECT

INSERT MCMMASTER-CARR COMPONENT

McMASTER-CARR.

92463a407

CONTACT US ORDER ORDER HISTORY LOG IN

CATALOG PAGE 3079 PRINT FORWARD THIS PAGE BOOKMARK THIS PAGE PAGE OPTIONS HOW CAN WE IN

1/4"	3/8"	1/4"	92463A401	\$2.53	99637A301	\$2.53
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1/2"	5/8"	1/2"	92463A403	2.78	99637A303	2.78
5/8"	3/4"	5/8"	92463A404	2.93	99637A304	2.93
3/4"	7/8"	3/4"	92463A405	3.02	99637A305	3.02
1"	1 1/8"	1"	92463A406	3.31	99637A306	3.31
1 1/4"	1 3/8"	1 1/4"	92463A407	3.48	99637A307	3.48

Product Detail

Type 316 Stainless Steel Binding Post for 1-1/4" to 1-3/8" Thick Material, 1/4" Diameter Barrel

Each

ADD TO ORDER

In stock

5/16" Barrel Dia.—Thread Size: 1/4"-20

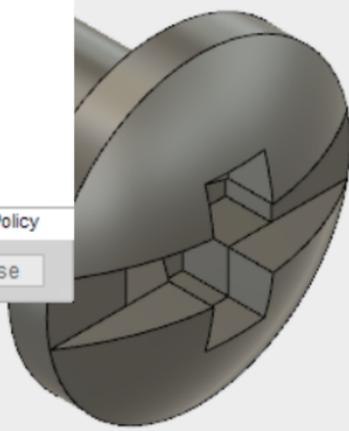
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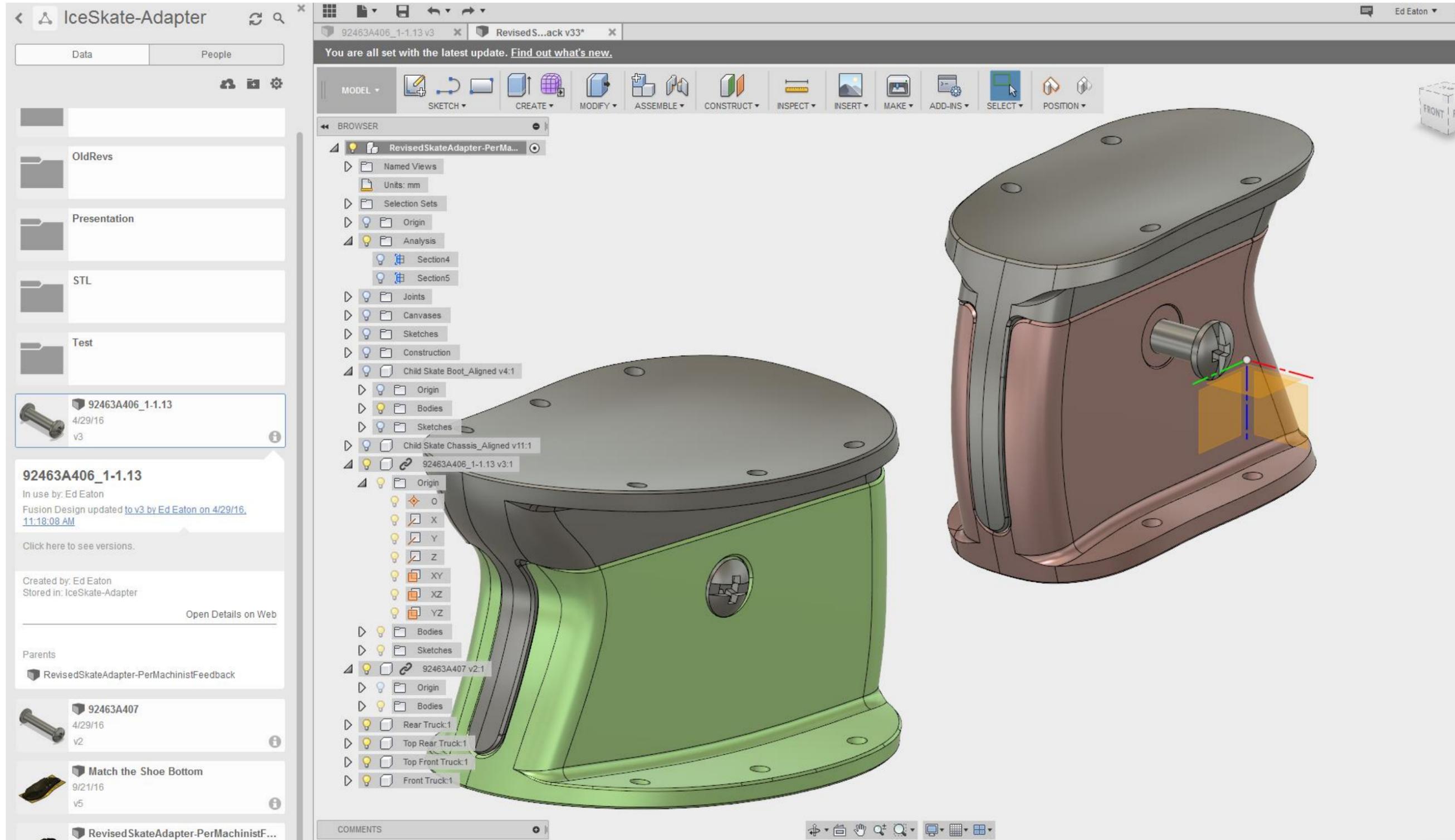
Close

Decal
Attached Canvas
Background Canvas
Insert T-Spline
Insert Mesh
Insert SVG
Insert DXF
Insert McMaster-Carr Component
parts4cad

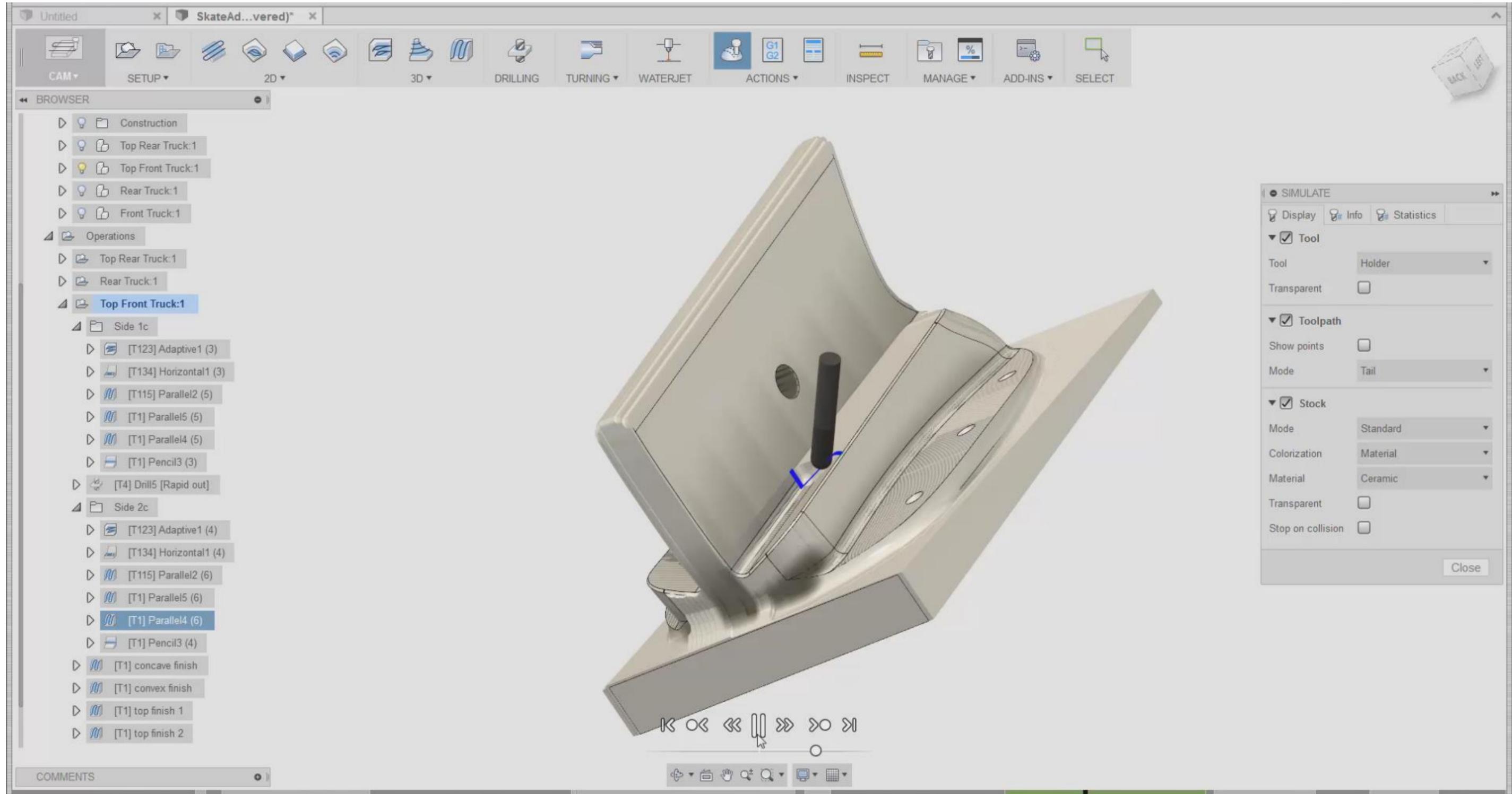
Insert a McMaster-Carr Component into the active document.
Browse to the desired component, click the Product Detail CAD icon, select the file type, then click Save.



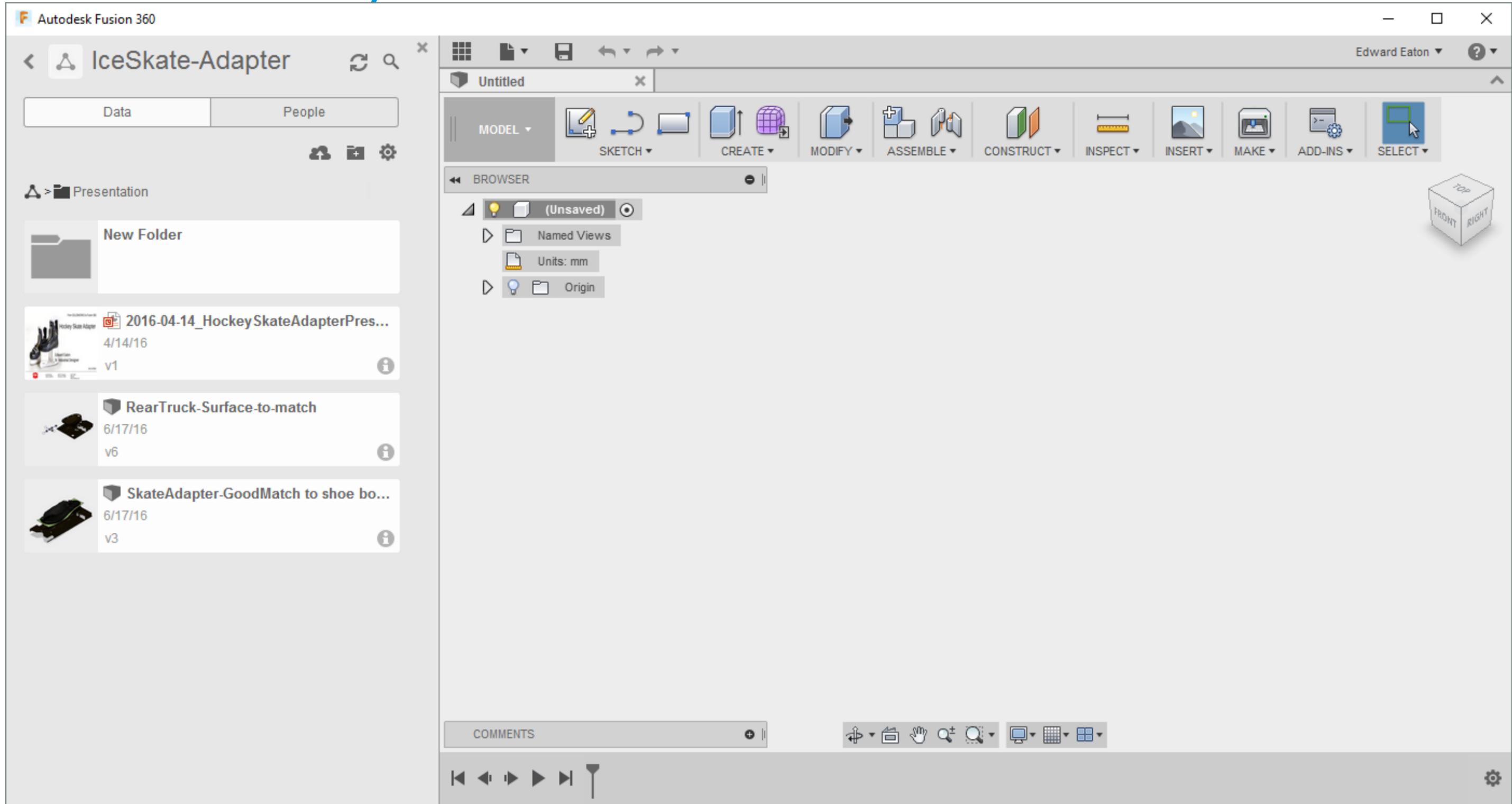
McMaster Carr



A Special Thanks to Autodesk

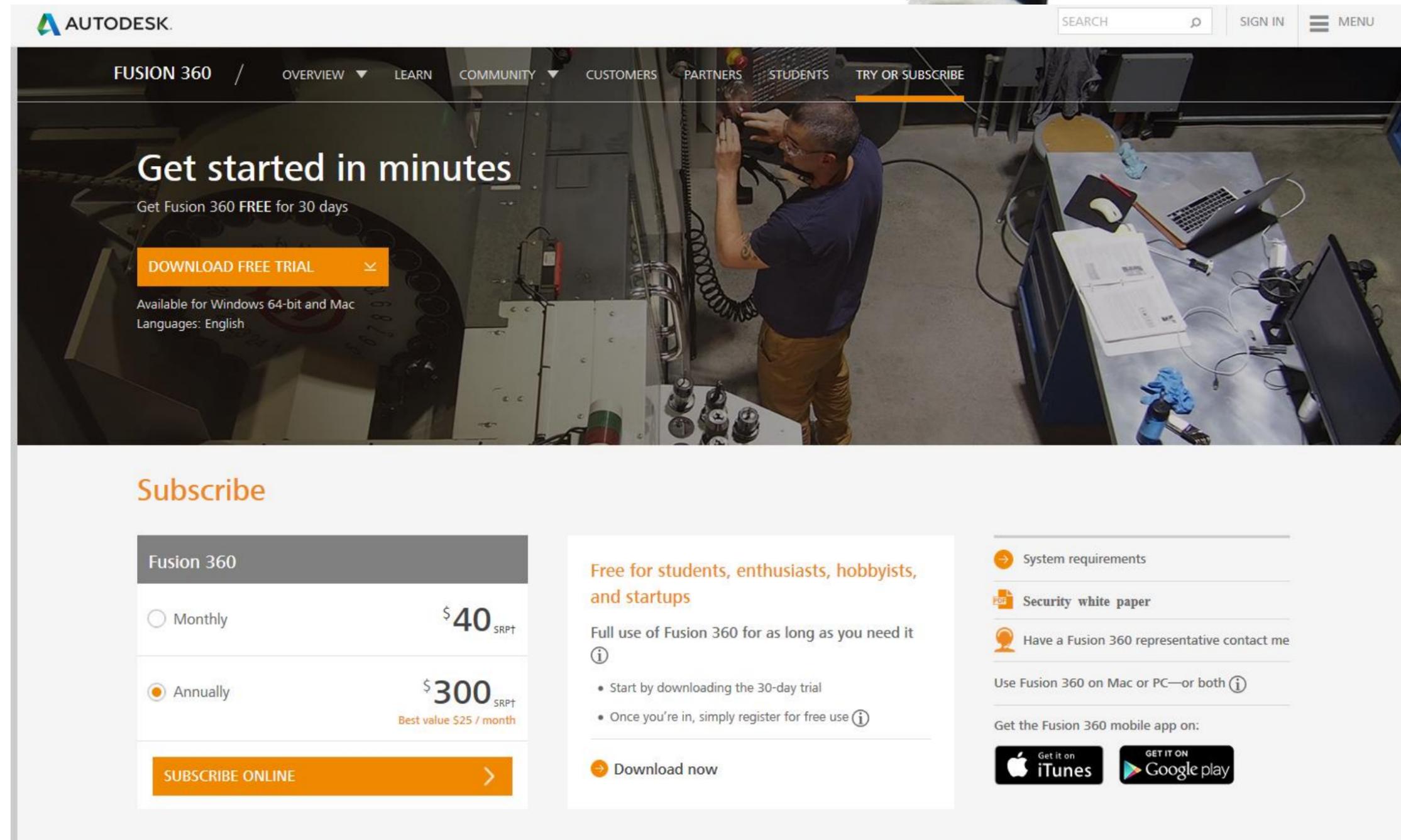


In 10 minutes, back to work!



The net

- Remember when CAD was fun?
- T-splines rock!
- Their hybrid cloud interface is collaboration heaven
- Device independence is a life saver
- Fusion 360 is a feature rich product at a price that blows my mind...



The screenshot shows the Autodesk Fusion 360 website. At the top, there is a navigation bar with the Autodesk logo, a search bar, and links for SIGN IN and MENU. Below the navigation bar, there is a main banner with the text "Get started in minutes" and "Get Fusion 360 FREE for 30 days". A prominent orange button says "DOWNLOAD FREE TRIAL". Below this, it states "Available for Windows 64-bit and Mac" and "Languages: English".

Below the banner, there is a "Subscribe" section. It features a table with two rows of subscription options:

Fusion 360	
<input type="radio"/> Monthly	\$40 _{SRPT}
<input checked="" type="radio"/> Annually	\$300 _{SRPT} Best value \$25 / month

Below the table is a large orange button that says "SUBSCRIBE ONLINE" with a right-pointing arrow.

To the right of the subscription table, there is a section titled "Free for students, enthusiasts, hobbyists, and startups". It includes the text "Full use of Fusion 360 for as long as you need it" with an information icon. Below this, there are two bullet points: "Start by downloading the 30-day trial" and "Once you're in, simply register for free use" with an information icon. At the bottom of this section is a "Download now" button with a right-pointing arrow.

On the far right, there is a vertical list of links: "System requirements", "Security white paper", and "Have a Fusion 360 representative contact me". Below these links, there is a note "Use Fusion 360 on Mac or PC—or both" with an information icon. At the bottom right, there are two buttons for mobile apps: "Get it on iTunes" and "GET IT ON Google play".

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Fusion 360 Answer Bar

Tuesday to Thursday 9am-6pm,
Venetian Level 3

- Meet the Fusion team
- Get expert tips
- Find Keqing and give feedback
- Get free swag!



Keqing "Kmoney" Song
Fusion 360 Product Manager &
Voice of the "What's New"

Autodesk.com/Fusion360

@adskFusion360
#Fusion360 #AU2016

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- Seek answers to all of your technical product questions by visiting the [Answer Bar](#).
- Open daily from **8am-6pm Tuesday** and **Wednesday**; **8am-4:30pm Thursday**.
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