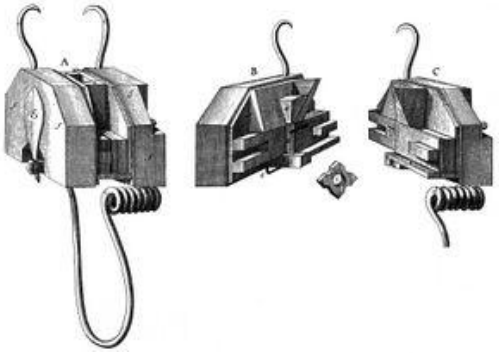
3Dhotbed

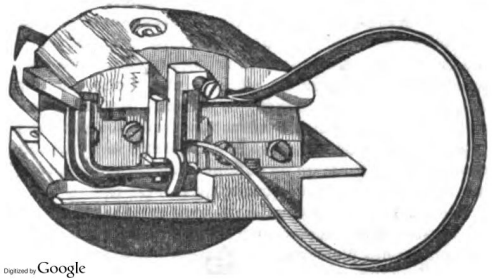
Code4lib South Central Conference
August 11, 2017

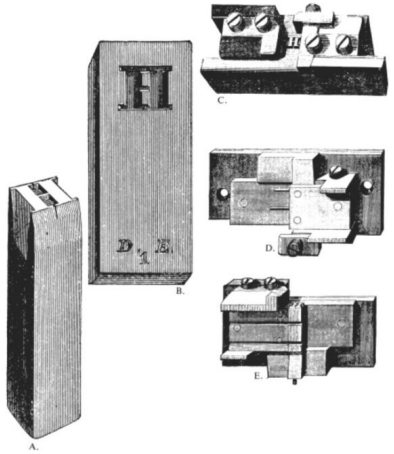
3Dhotbed.info
tiny.cc/3dhotbedrbms

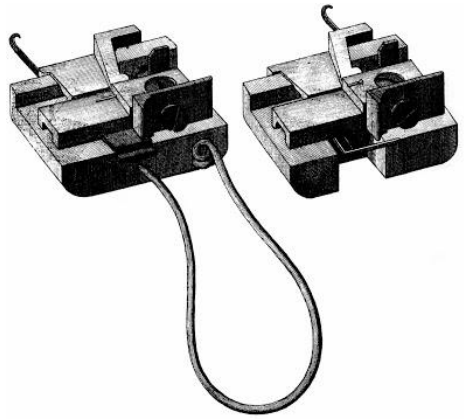
What is 3DHOTBED

3D printed
History
Of
The
Book
EDucation









GREEN LIGHT TO GREATNESS

FALL 2015 | $3750 Grant | 3D scanner, supplies and accessories acquired

NEXT ENGINE HD 3D SCANNER

UNT MINIATURE BOOK COLLECTION

@UNTSpecColl
@3Dhotbed

PROJECT OUTPUT

CAN WE APPLY IT ELSEWHERE?

- Workflow established
- Proved viability of 3D scanning rare/fragile items
- Provided inspiration for other projects

DEMAND FOR BOOK HISTORY INSTRUCTION

ENGLISH 5750: Methods of Historical Research

Examination of the basic problems and methods pertinent to the use of primary materials in literary research; consideration of types of bibliography, problems in textual analysis and editing, and approaches to archival research and literary history.

College of Visual Art and Design

ASTU 5305: Advanced Artist's Bookmaking

ASTU 5300: Printmaking studio

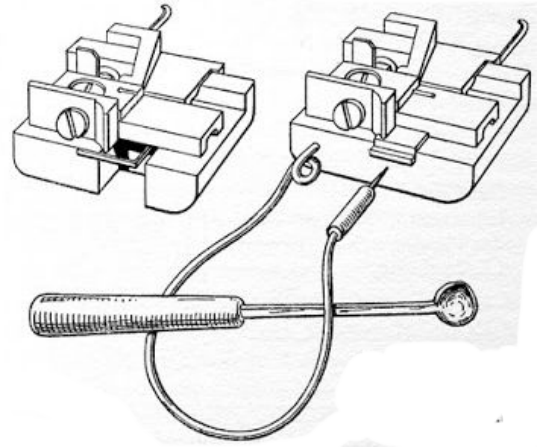
ADES 1510: Typography

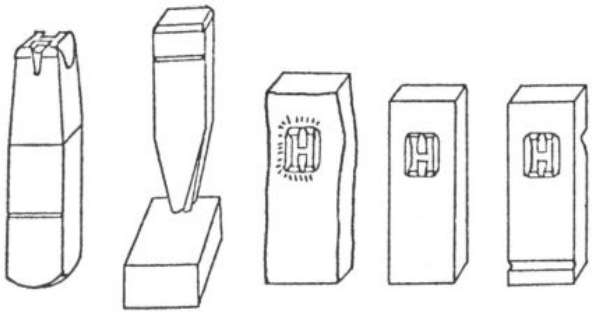
BOOK HISTORY TEACHING TOOLS

UNT Teaching Collection includes:

- Various loose wood and metal type
- Adjustable compositing sticks
- A single locked up broadside forme
- Format sheets for folding exercises
- Book Arts Press instructional videos
    - From Punch to Printing Type
    - The Making of a Rennaissance Book

ISO: An adjustable hand mould

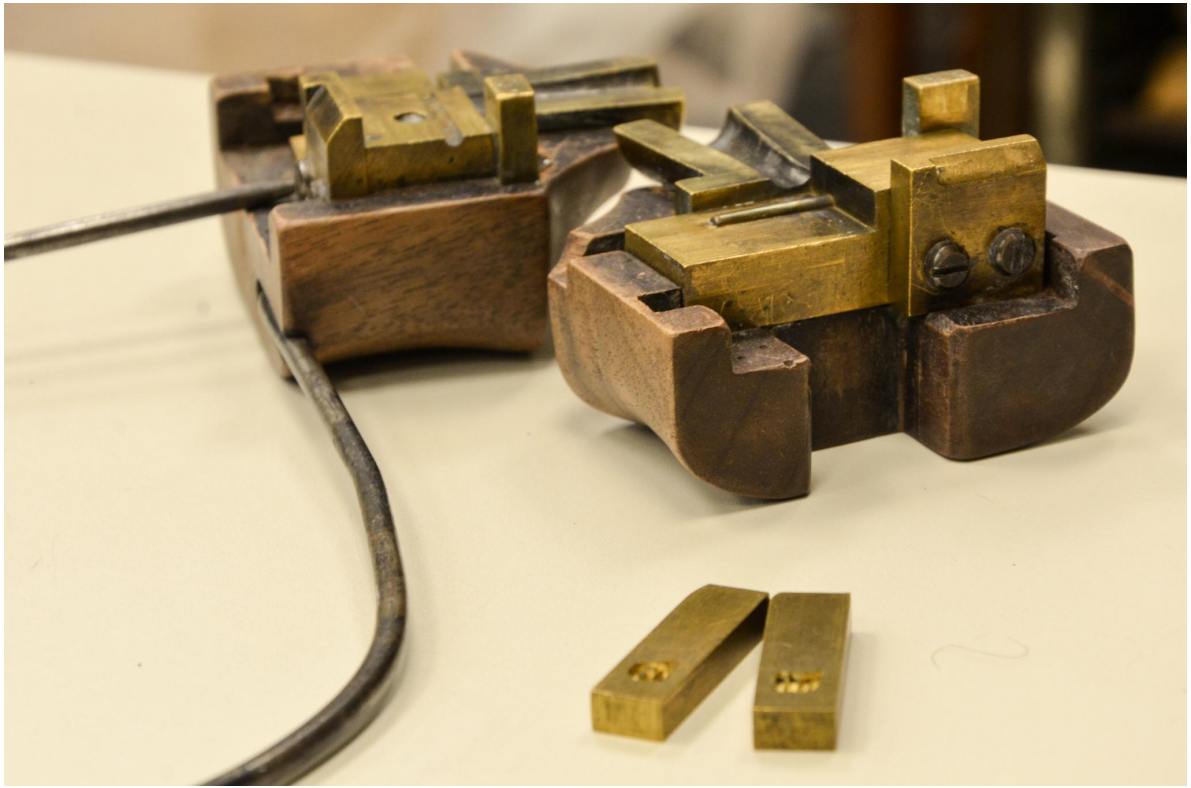




ADJUSTABLE HAND MOULDS ARE EXPENSIVE

Custom built

$3,000 - $4,000



DO YOU WANT TO MAKE A HAND MOULD?

WE HAVE

- A workflow for scanning rare materials to capture physical information
- An in-house makerspace with 3D printing technologies
- A (friendly!) colleague with a hand mould

BOOK HISTORY WORKSHOP

https://texashistory.unt.edu/ark:/67531/metadc288089/

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BOOK HISTORY WORKSHOP

2002 - Today

Instructs the full complement of skills in hand-press printing using period-accurate tools and techniques:

- Typesetting
- Papermaking
- Inkmaking
- Book Illustration
- Decorative Paper Arts
- Typecasting

More info: **http://library.tamu.edu/book-history**

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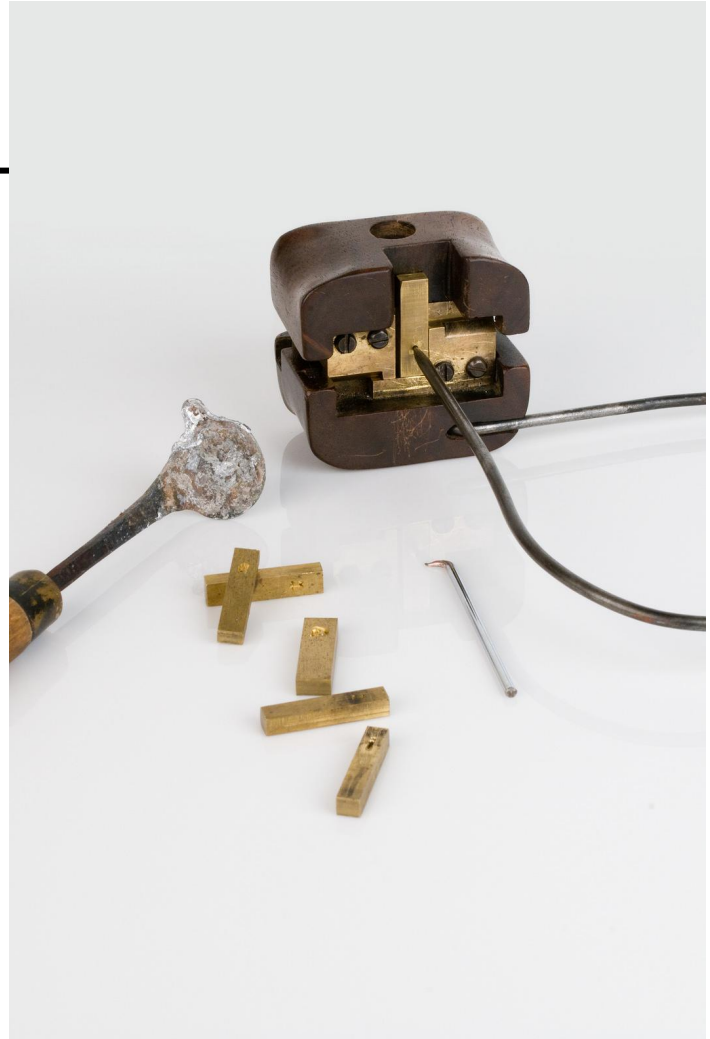
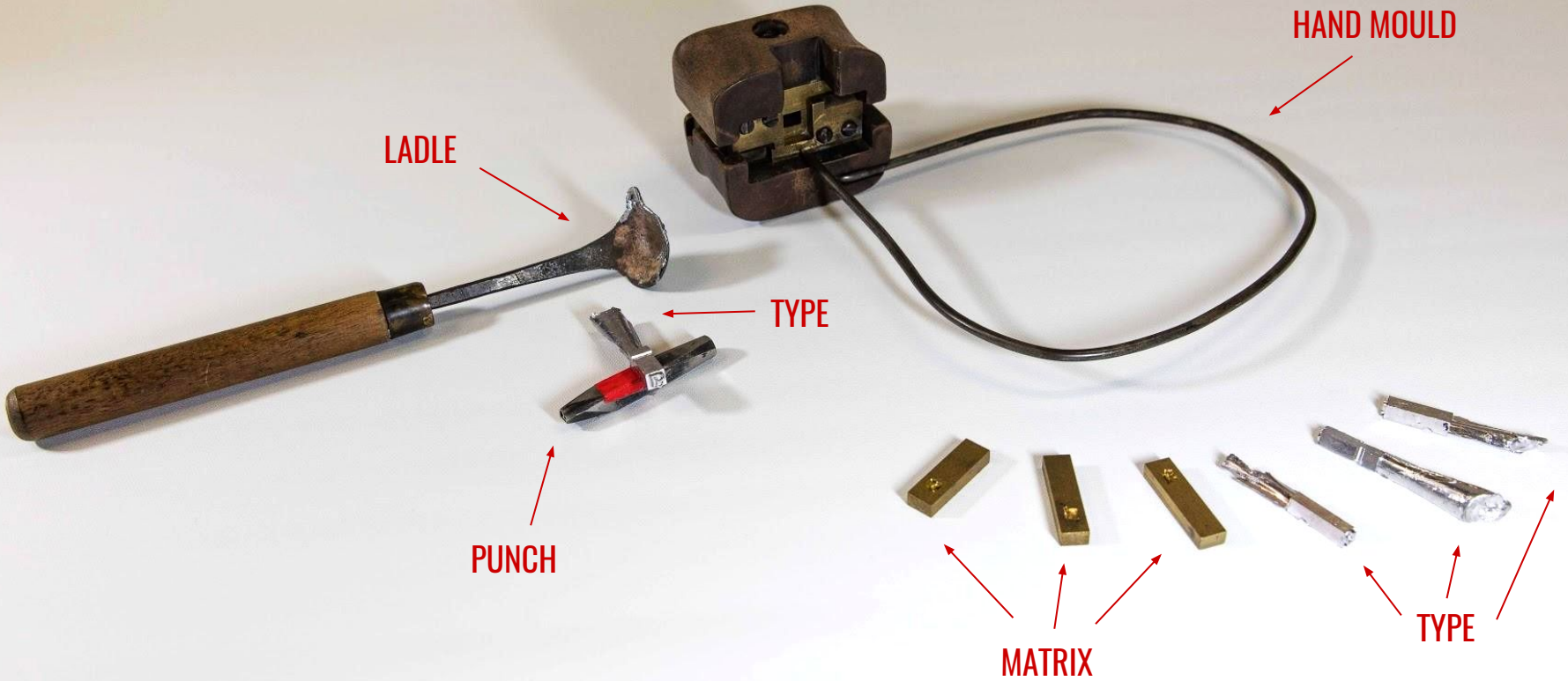


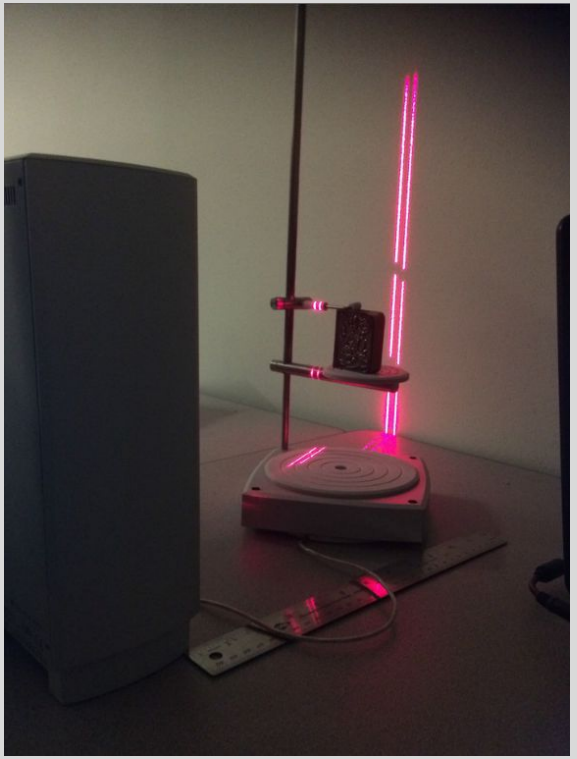
3DHOTBED TEACHING TOOLKIT



@3Dhotbed

3D SCANNING

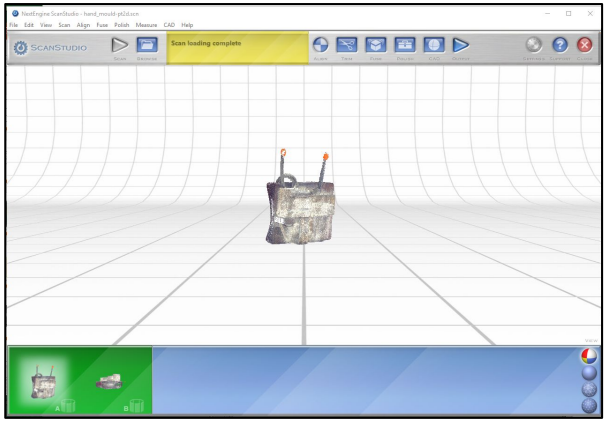
AKA: 3D Imaging, Laser Scanning, Laser Digitizing, and Digital Shape Sampling & Processing



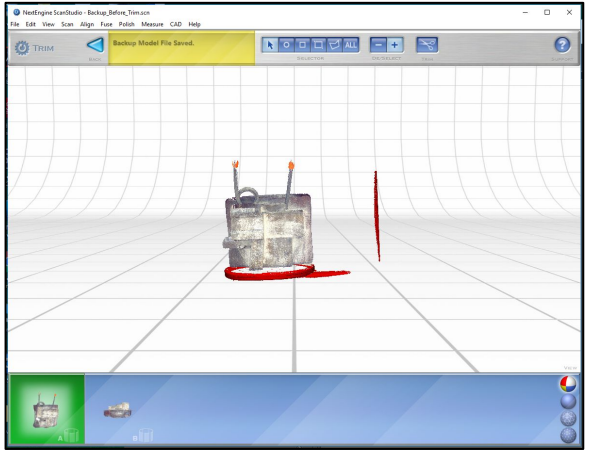
Digital method for analysing real-world objects using laser or light to capture information about the object's shape, size, and possibly color.

PRE-TREATING MODELS

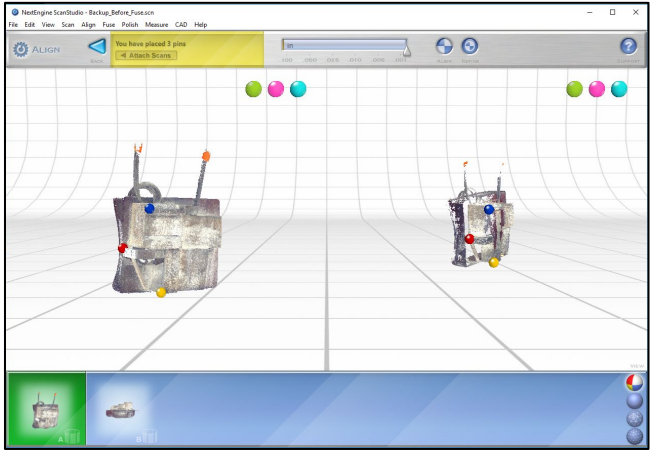
@3Dhotbed



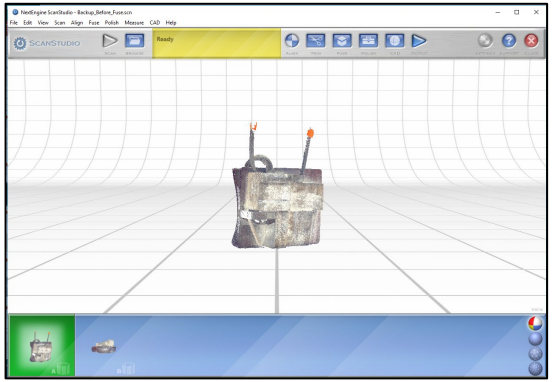
RAW SCAN

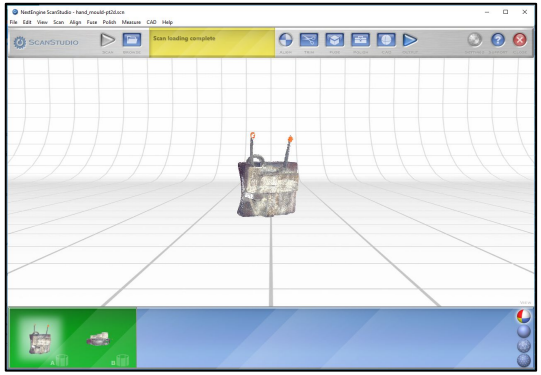


TRIMMING SCAN

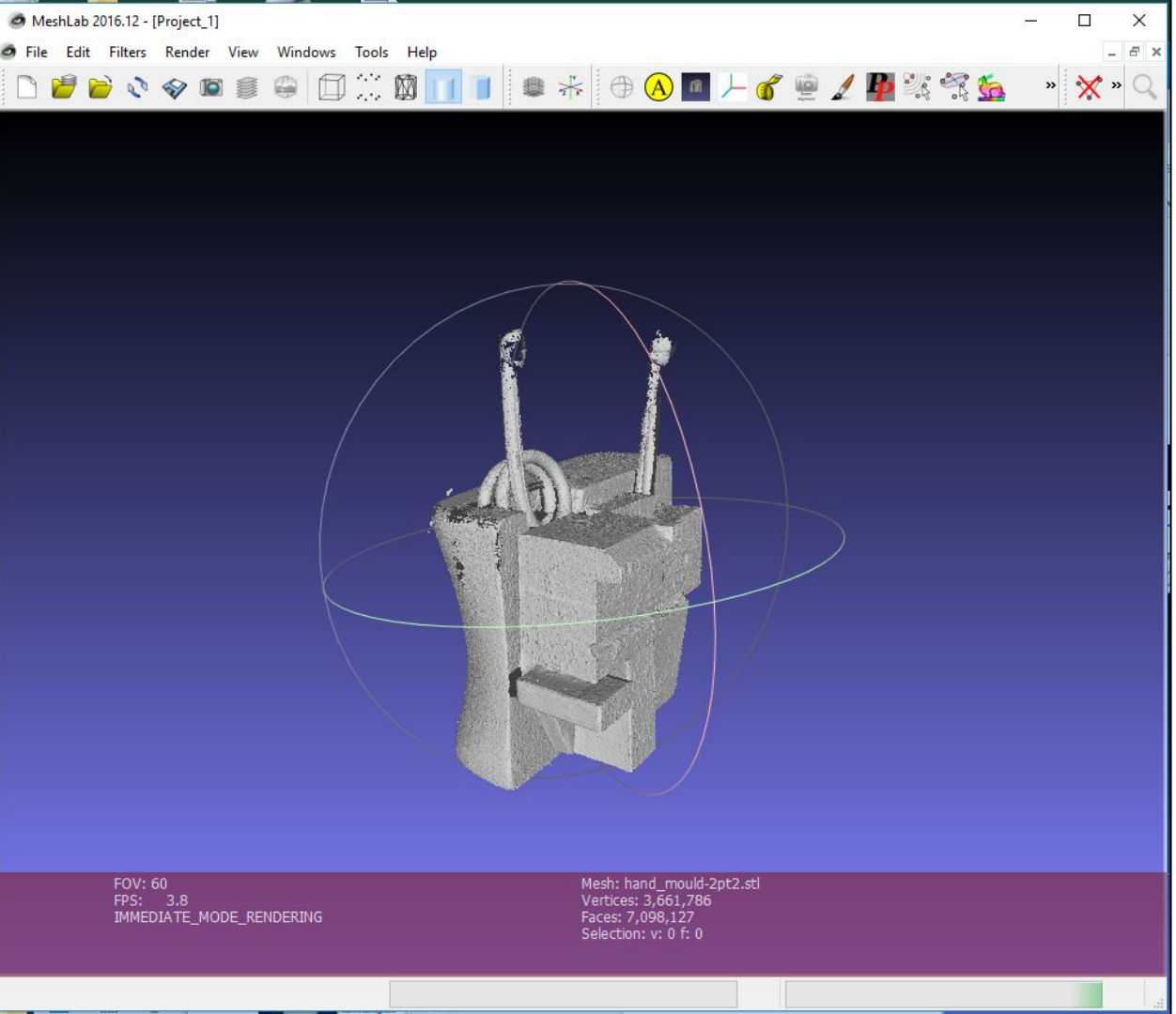


ALIGNING SCANS

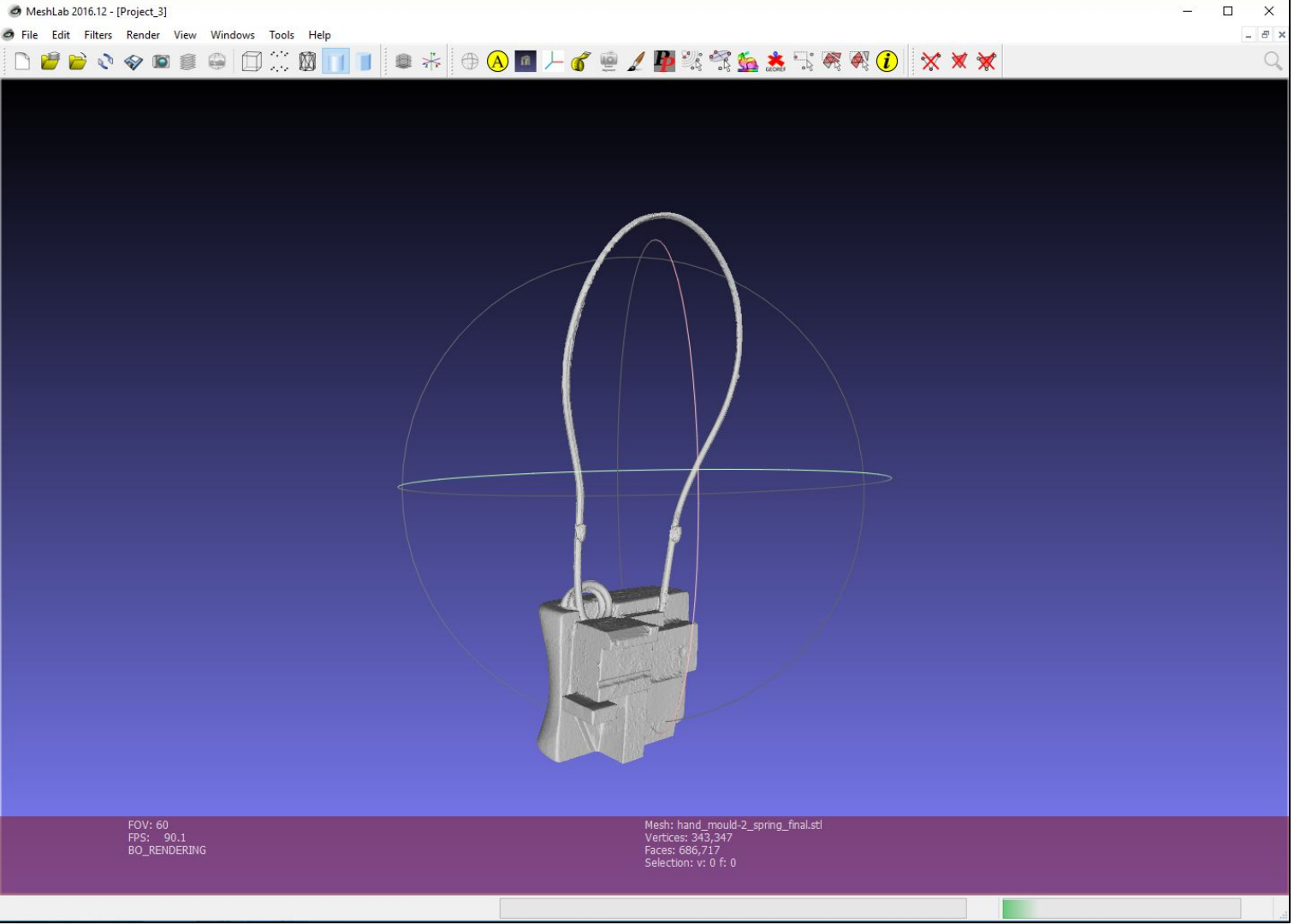




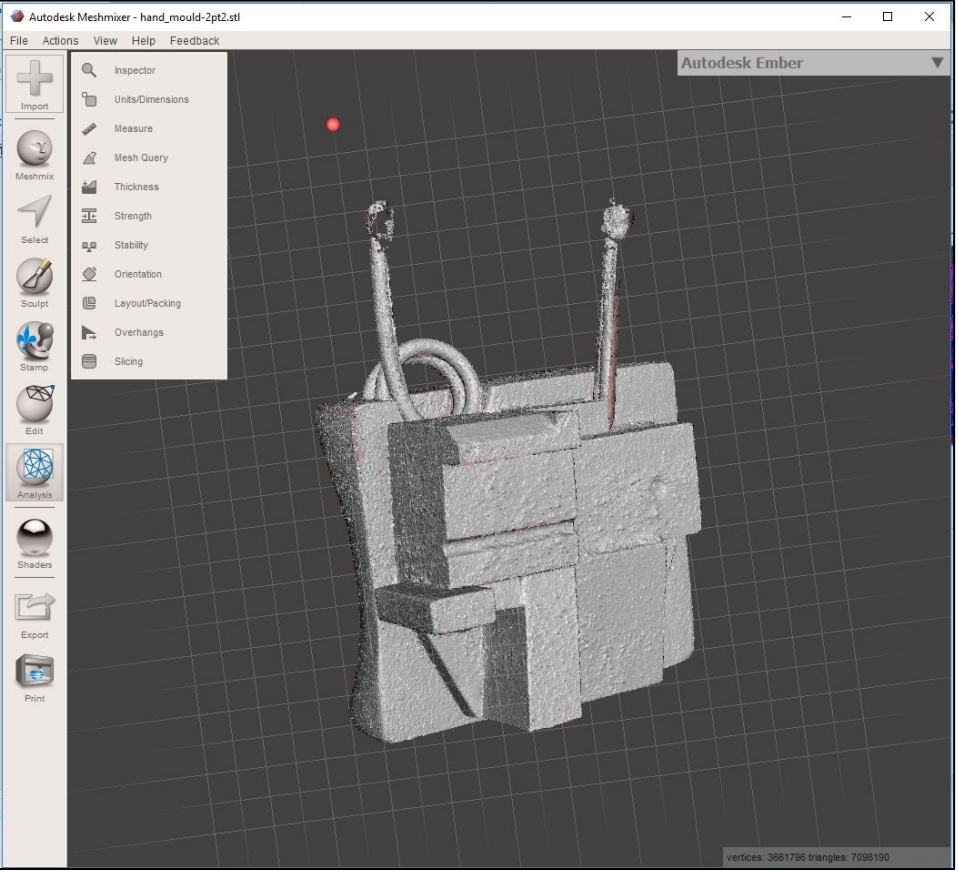
FUSING SCANS

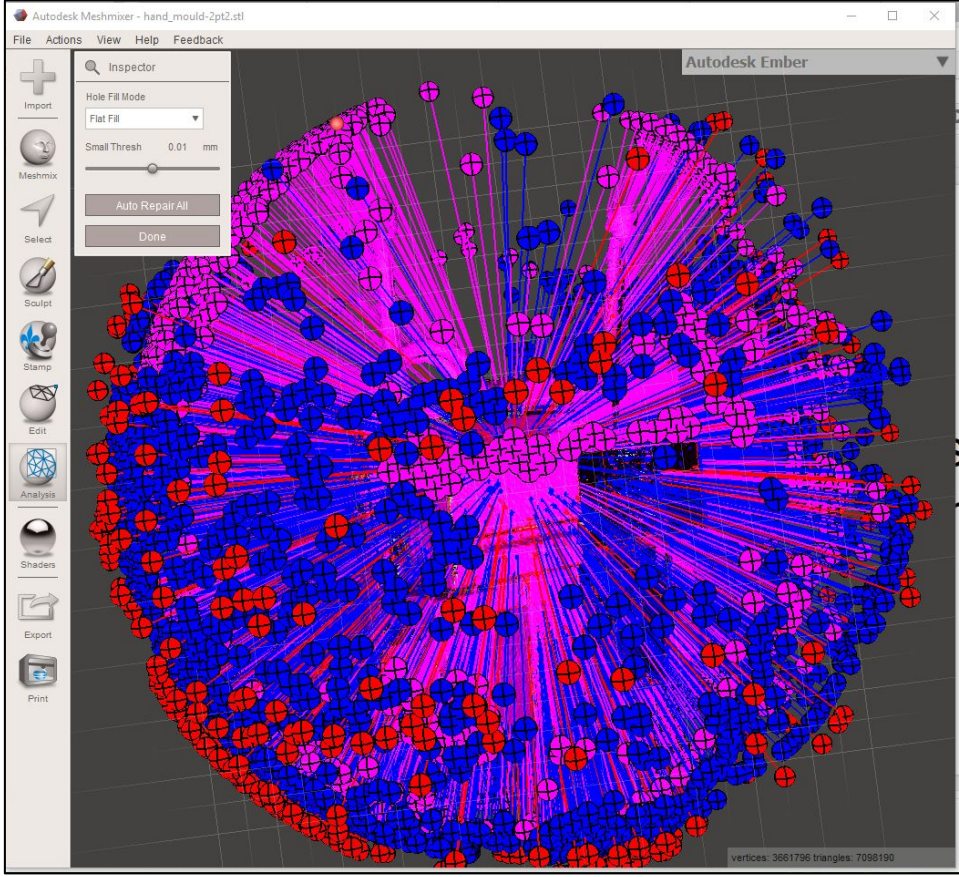


Meshlab
Model
Post- Processing

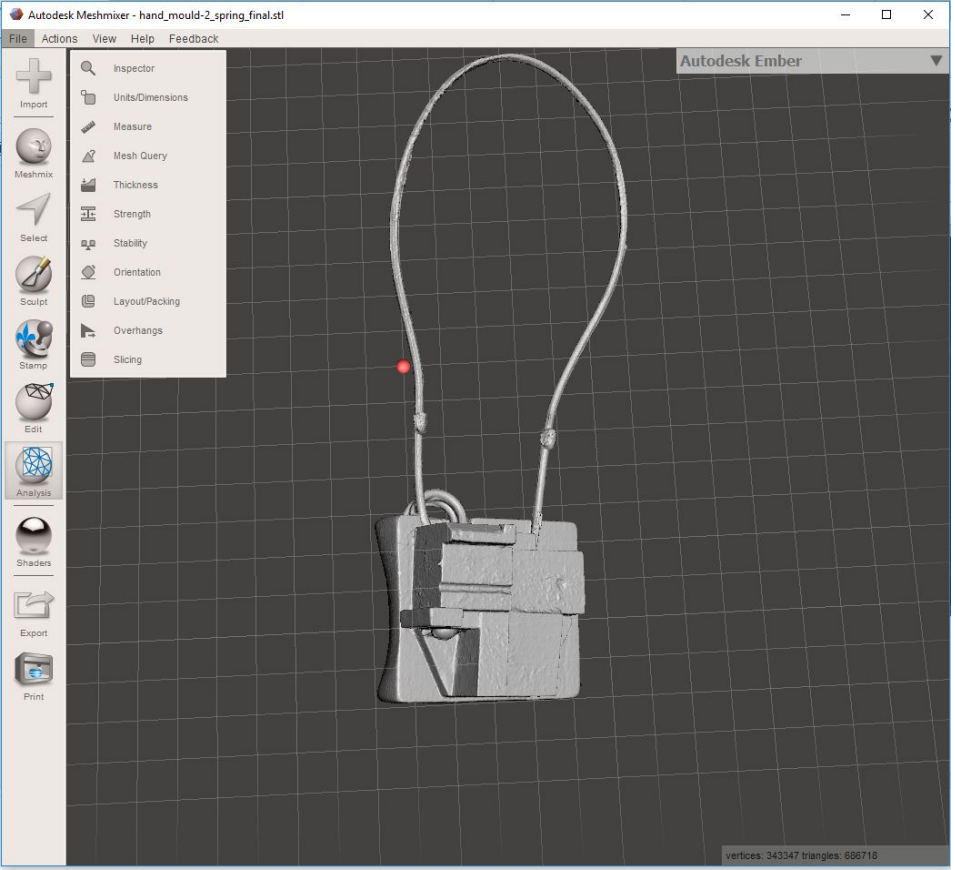


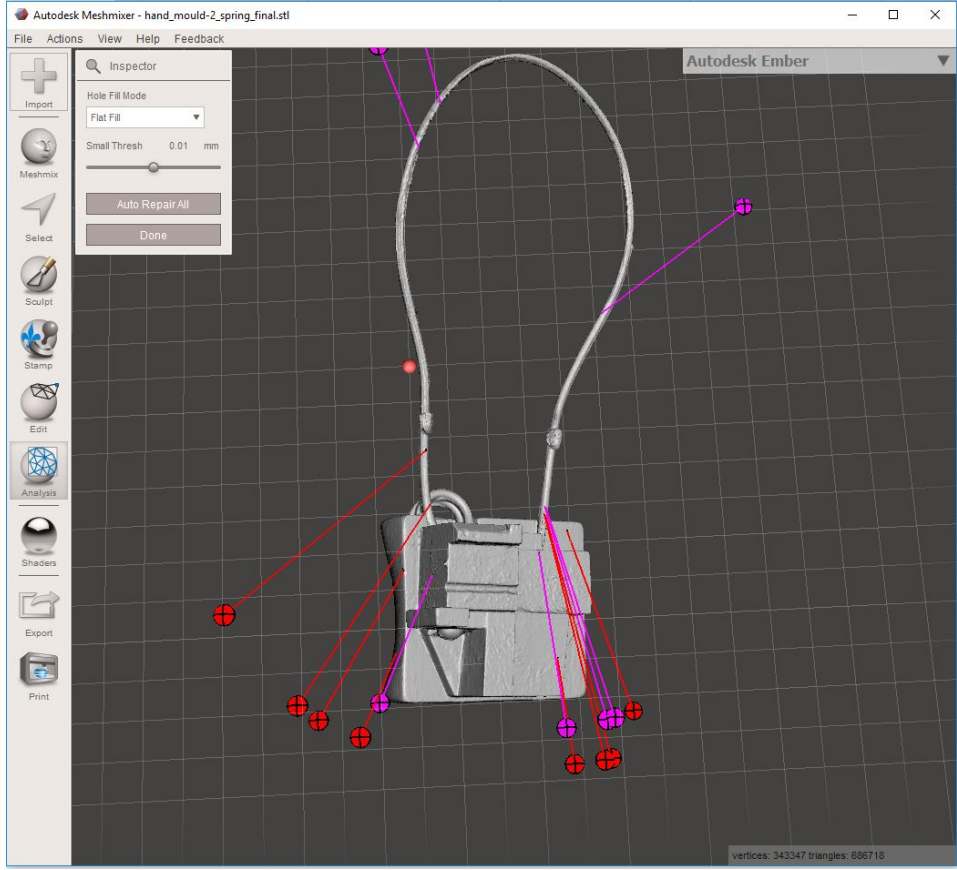
Meshlab Final Model





Meshmixer Inspection Tool

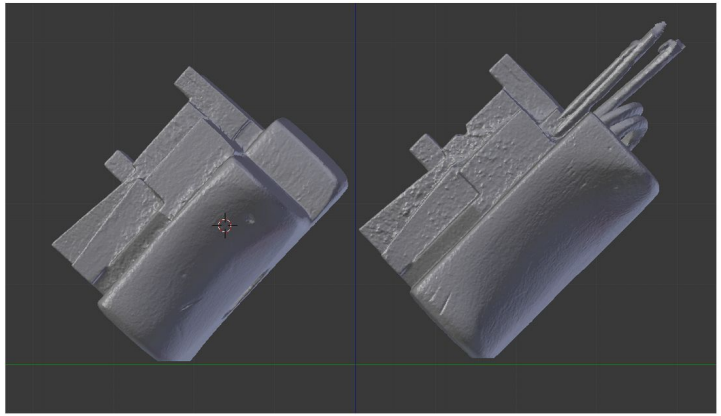


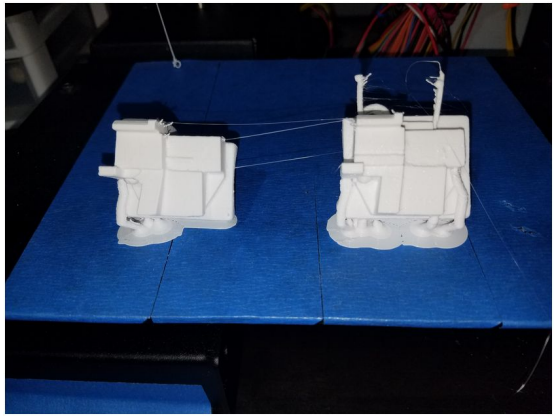


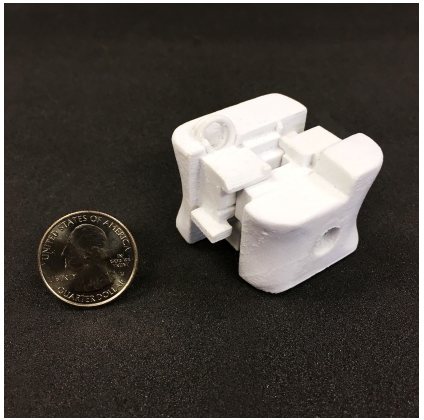
Meshmixer Analysis on Final Mould 2

PROTO-TYPING

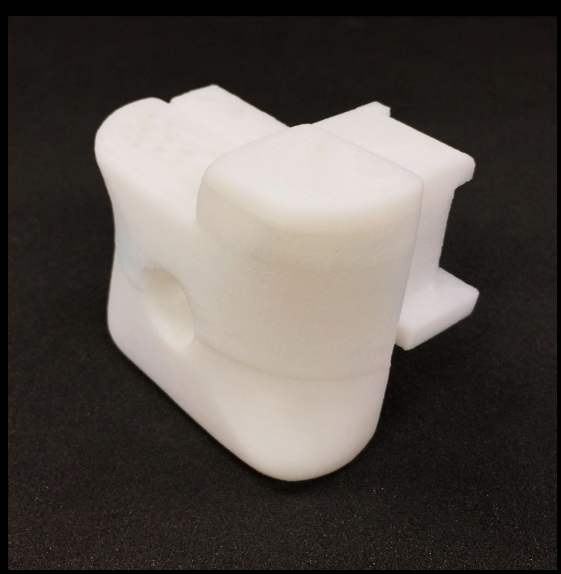
Models printed at 50% to test fit

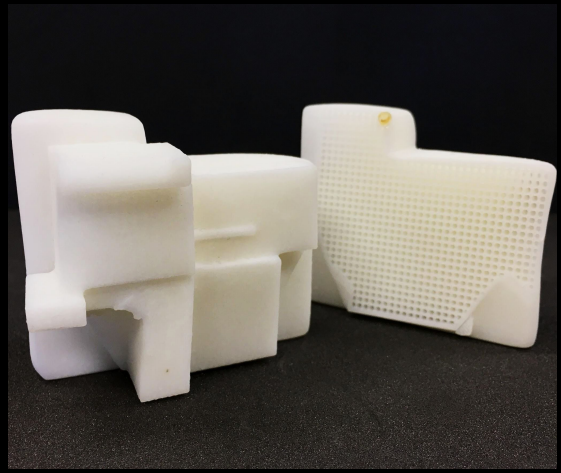




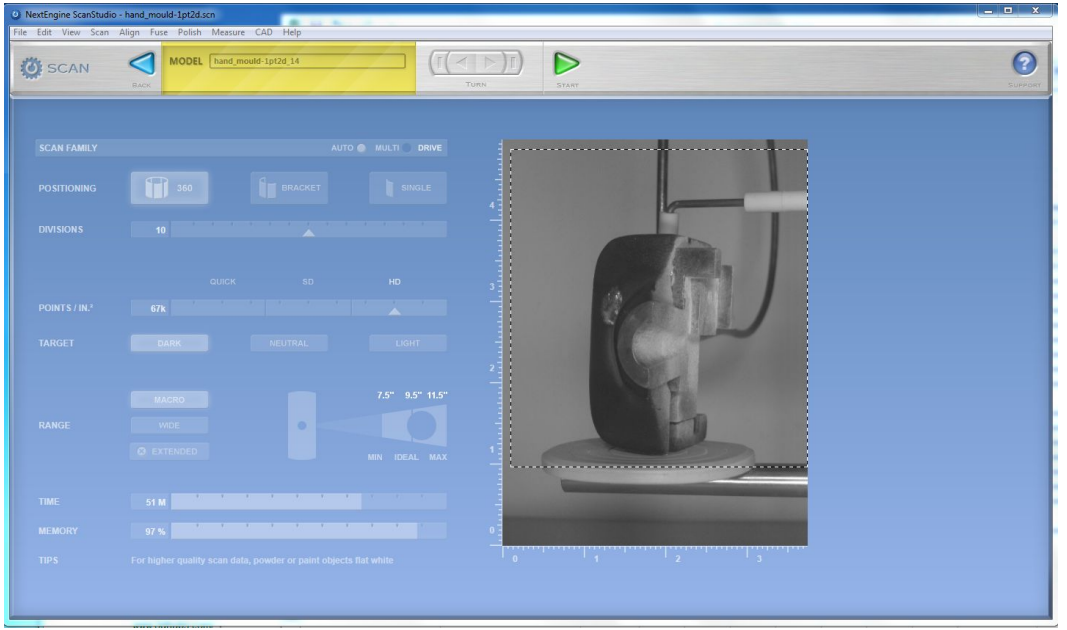


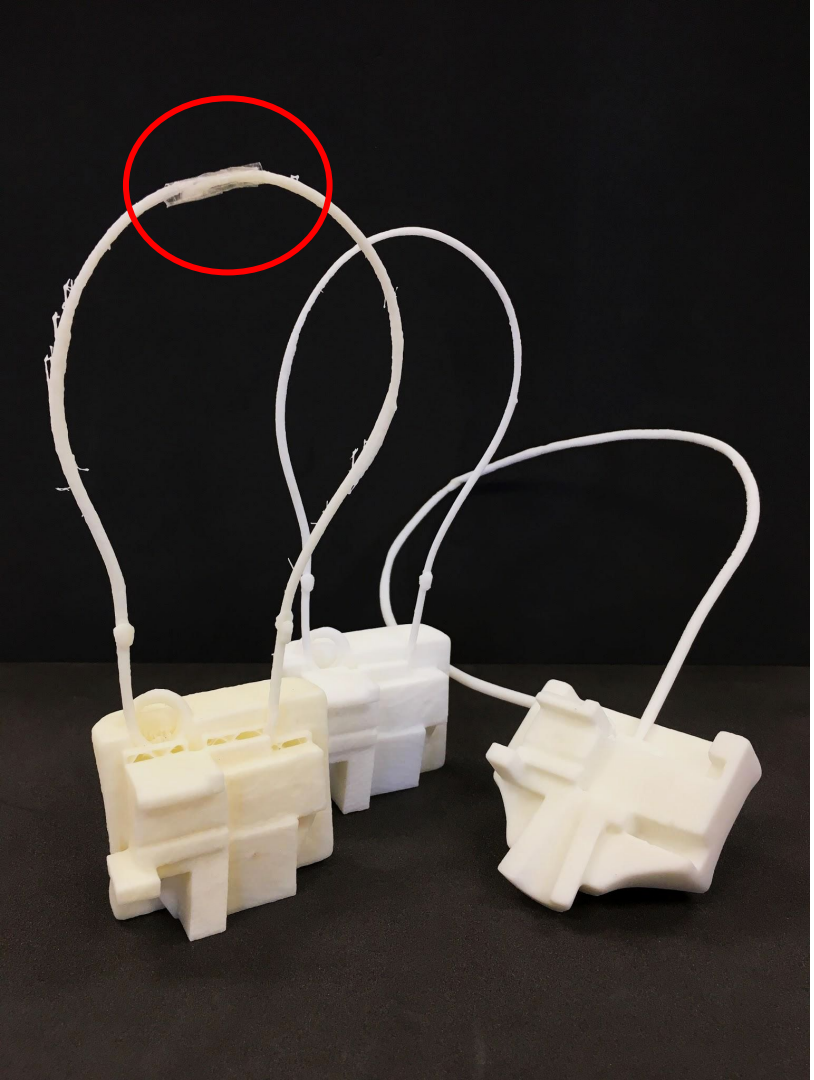
MOULD #2: FINAL PRINTS



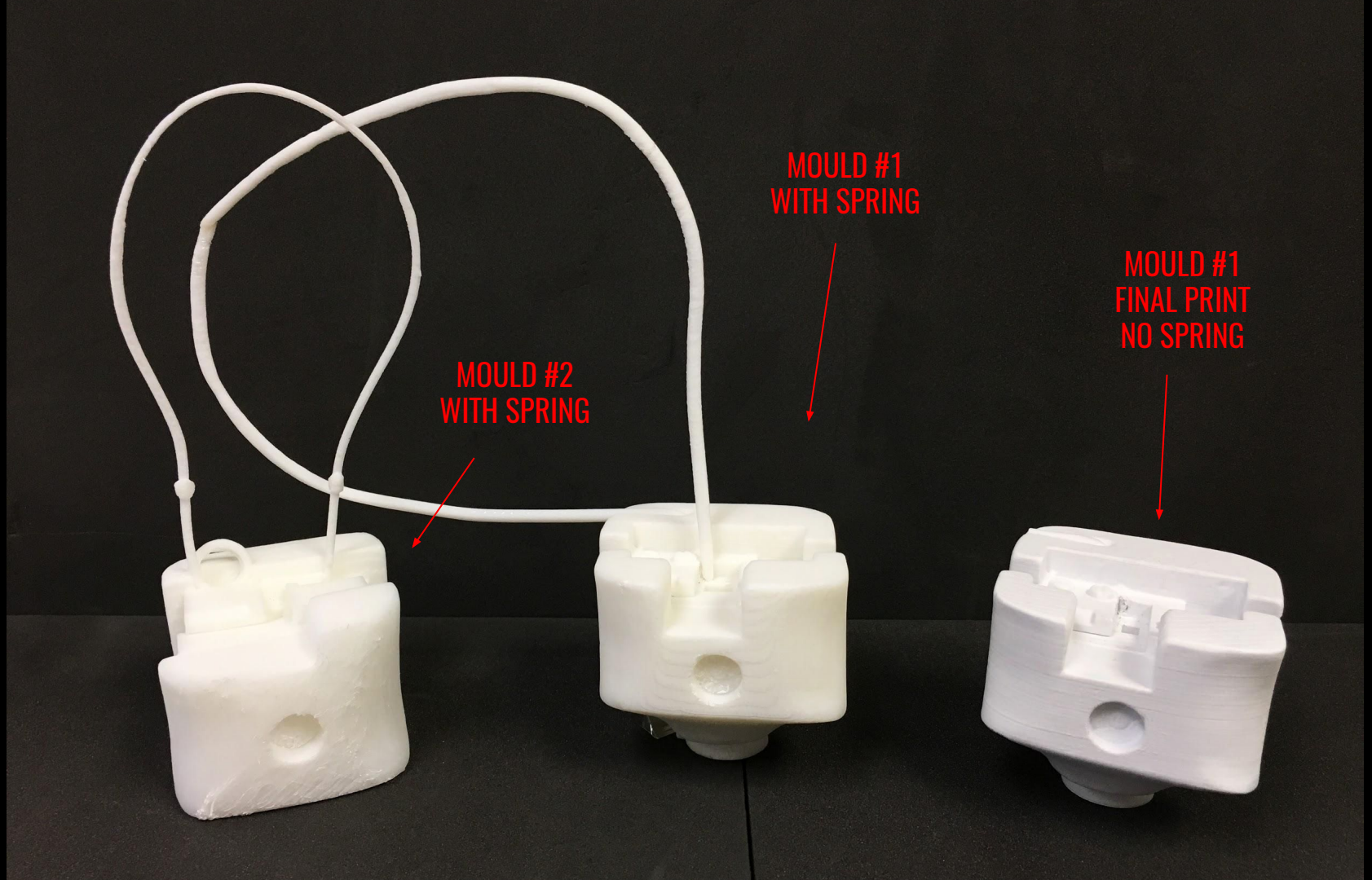


BIGGER SPRING = BIGGER PROBLEMS

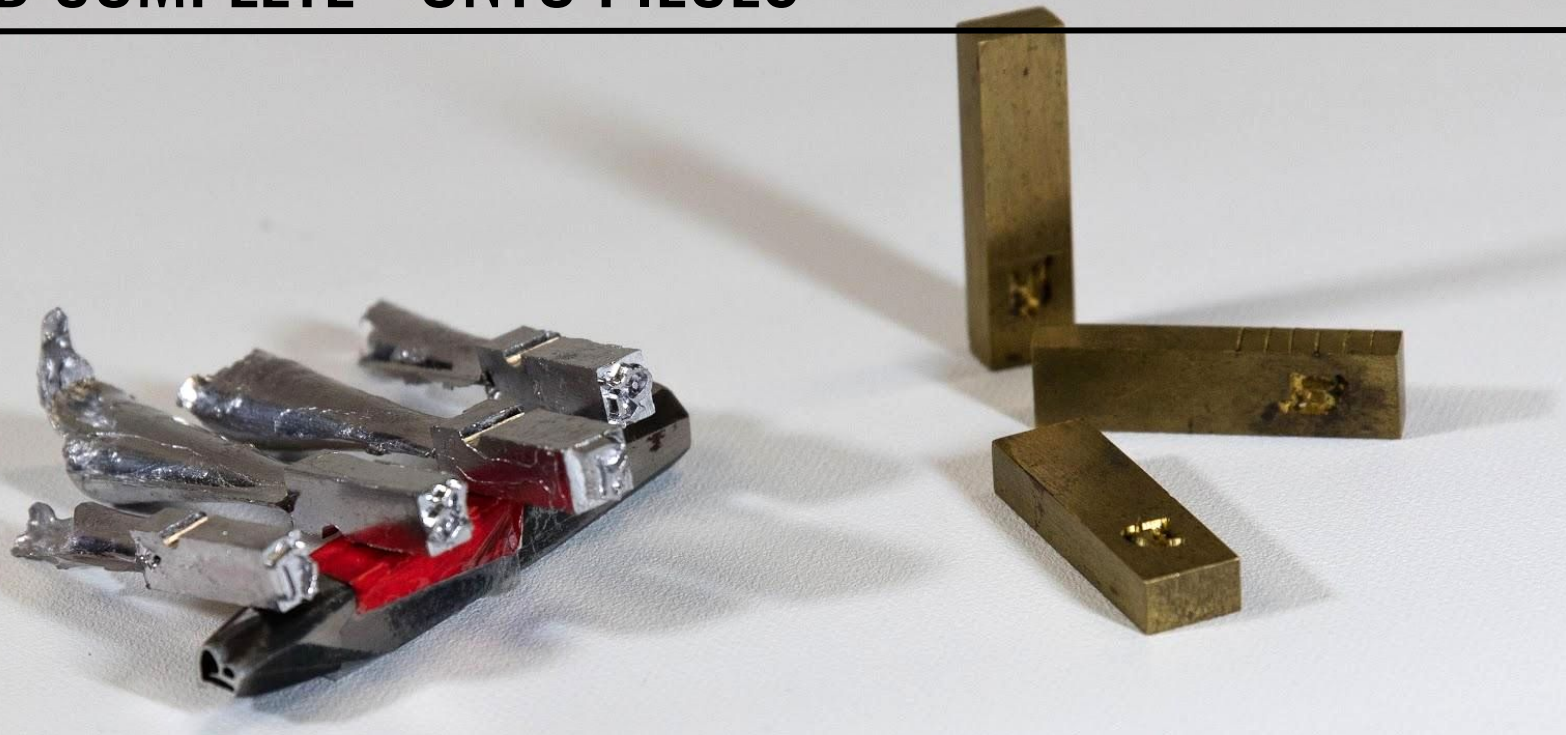




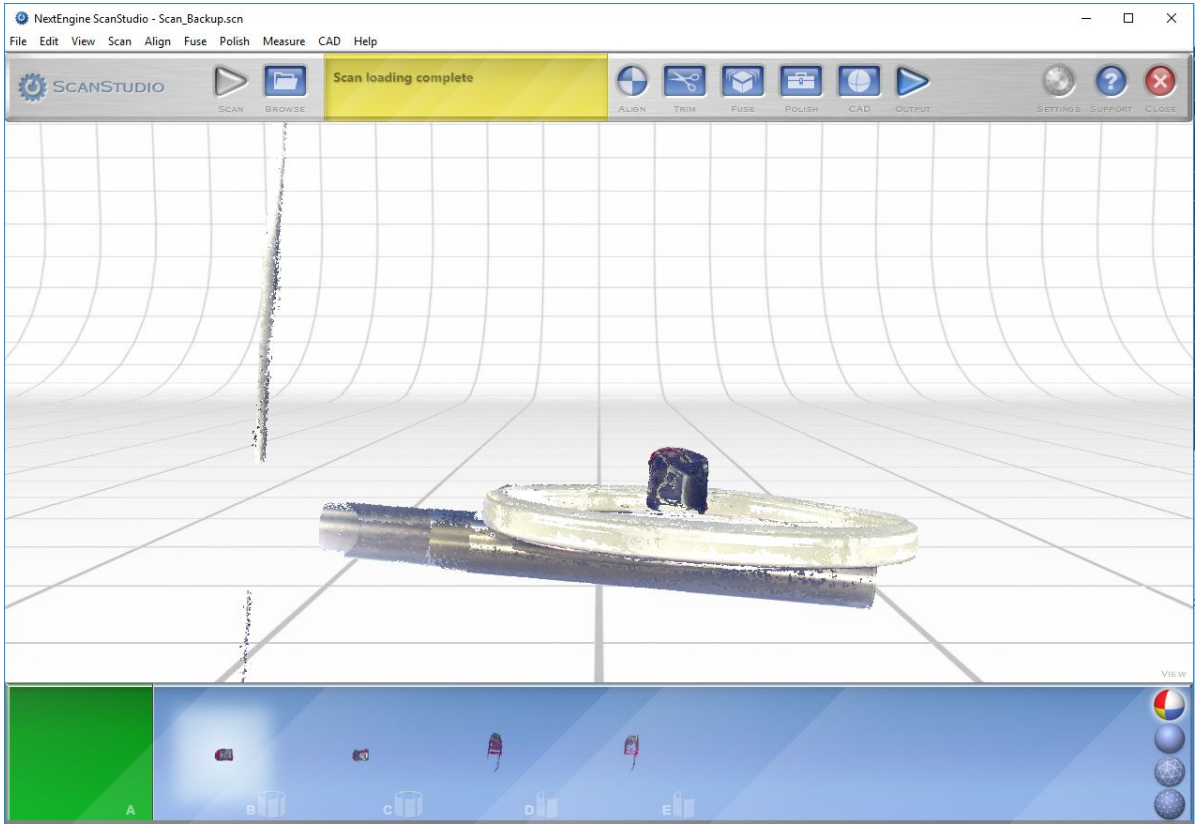
SPRING


MOULD #2
WITH SPRING
MOULD #1
WITH SPRING
MOULD #1
FINAL PRINT
NO SPRING

MOULD COMPLETE - ONTO PIECES



SCANNING PUNCH



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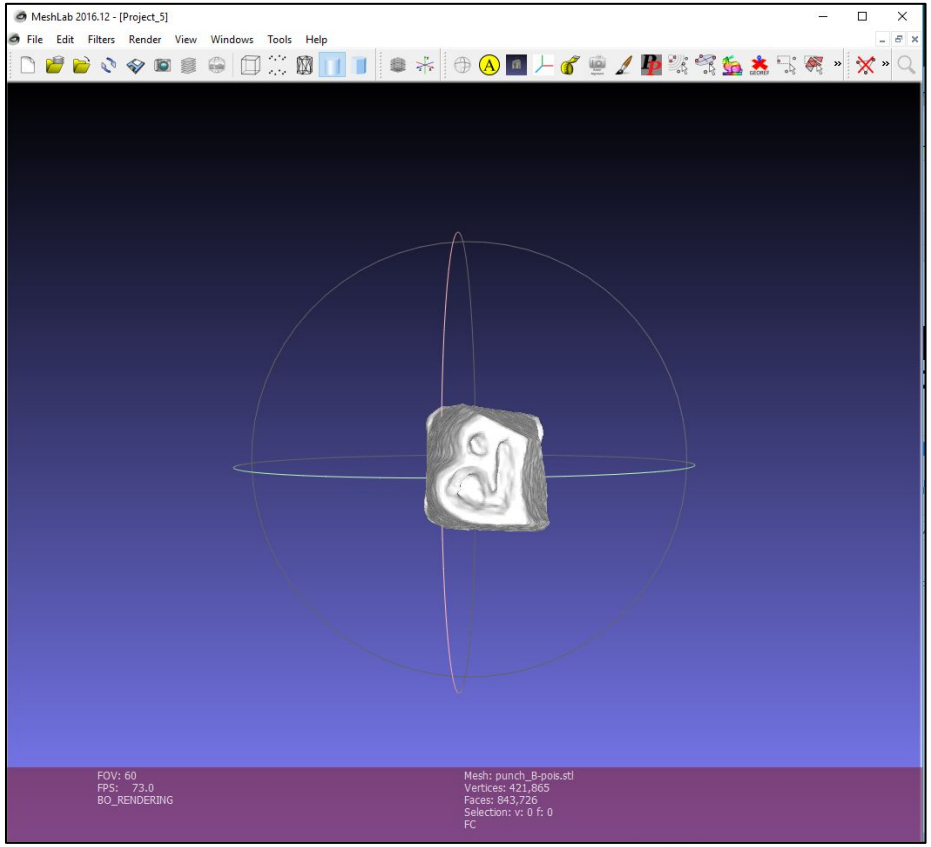
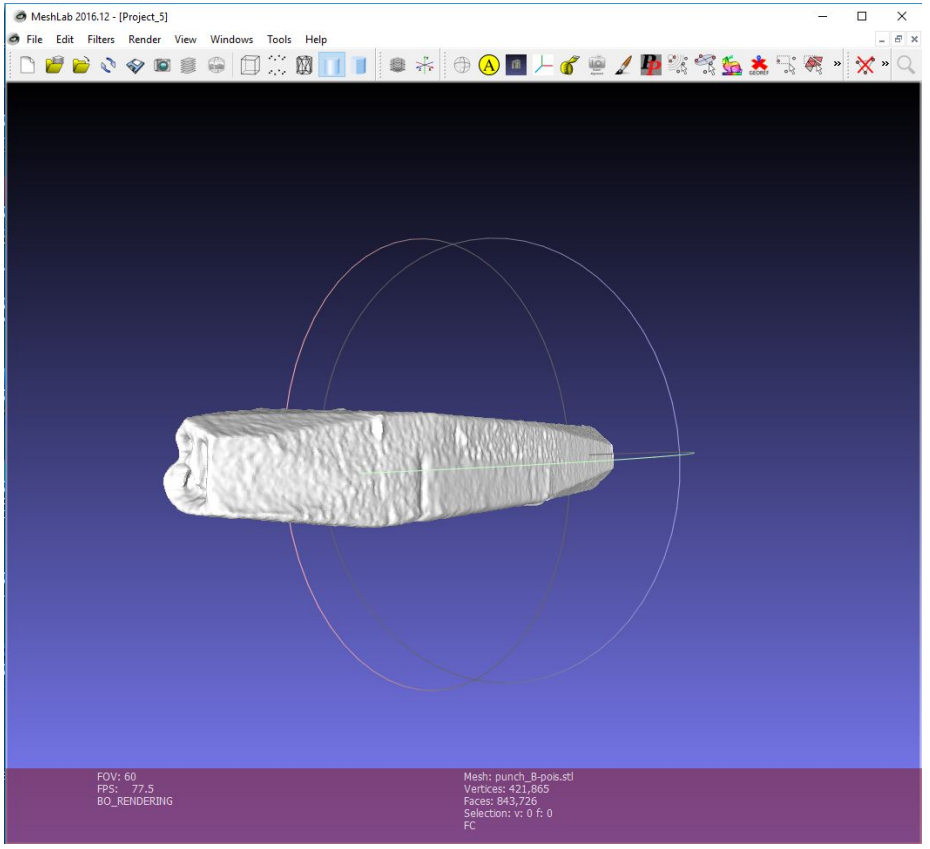
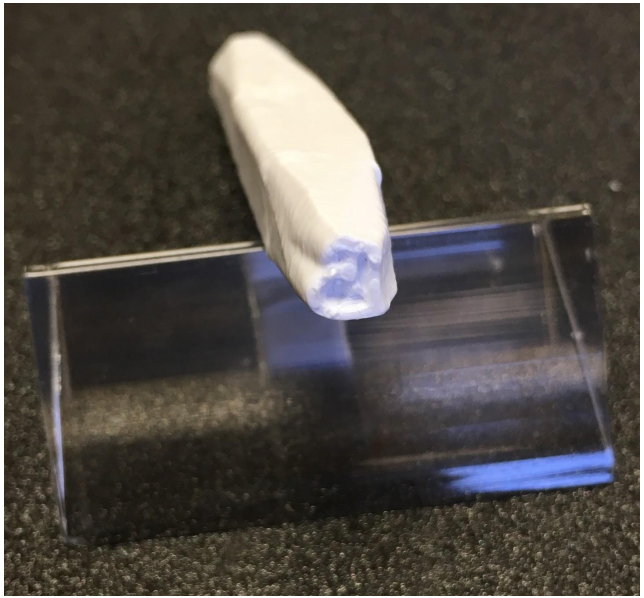
PROCESSING SCANNED PUNCH

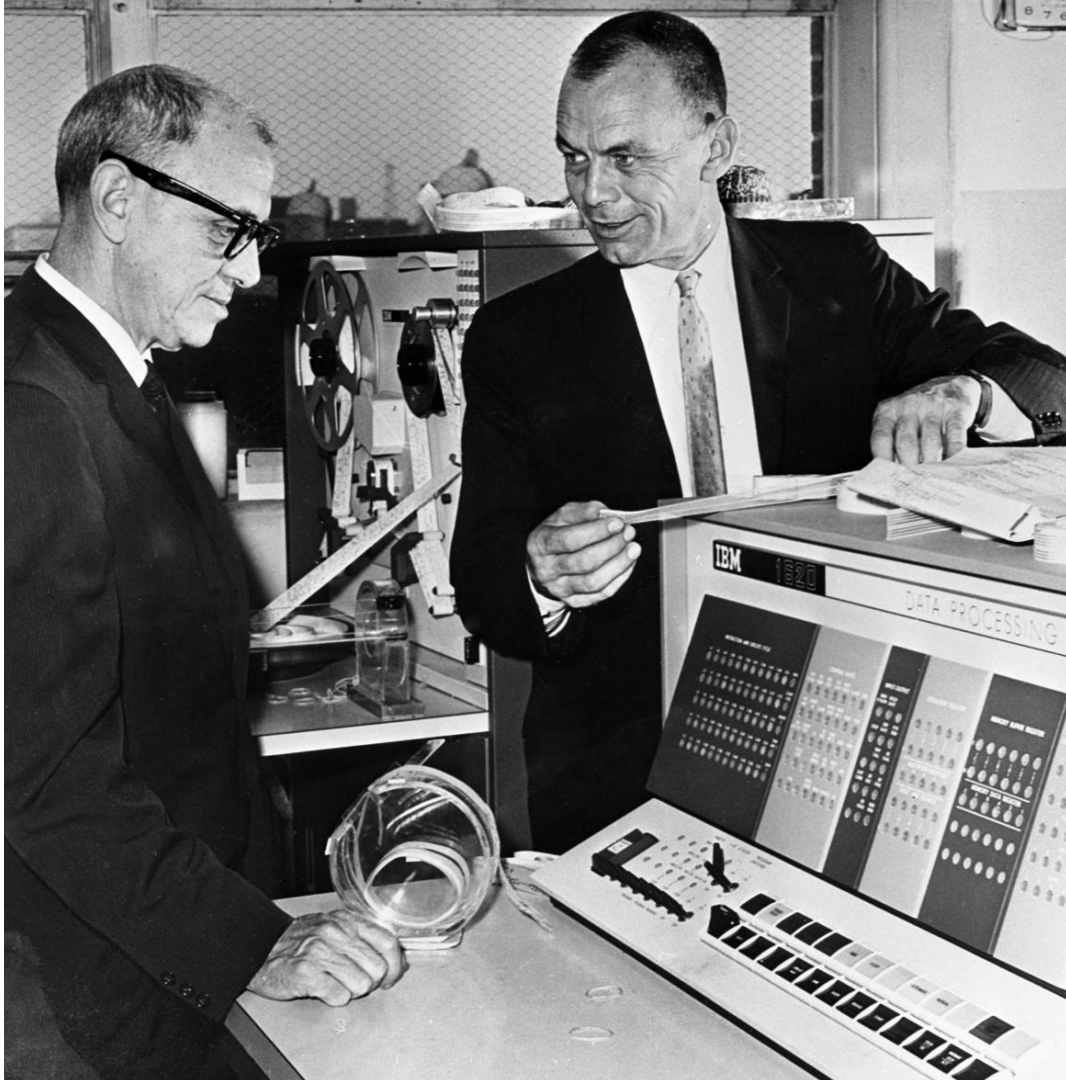




PRINTS FROM SCANS



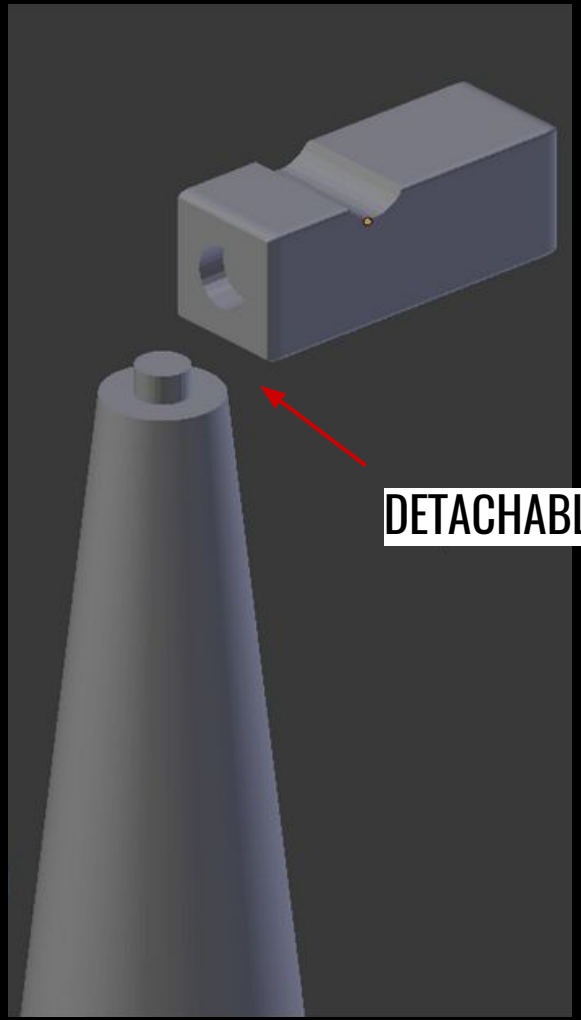
CONSULTING WITH OUTSIDE VENDORS



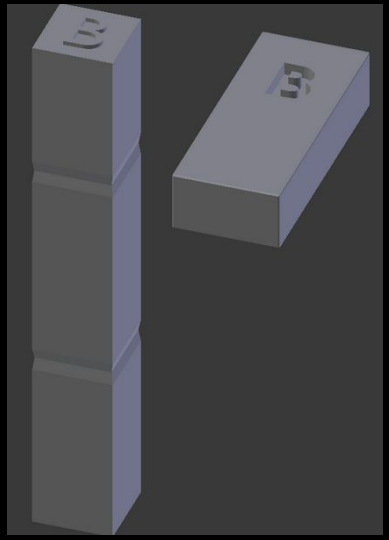
3D MODELING

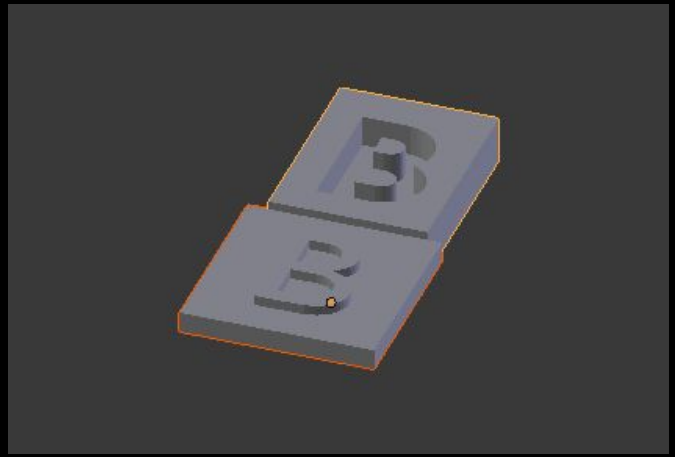
3D models can be created by hand, through procedural modeling, or scanning.

Process of developing a mathematical representation of a three-dimensional surface of an object via specialized software.

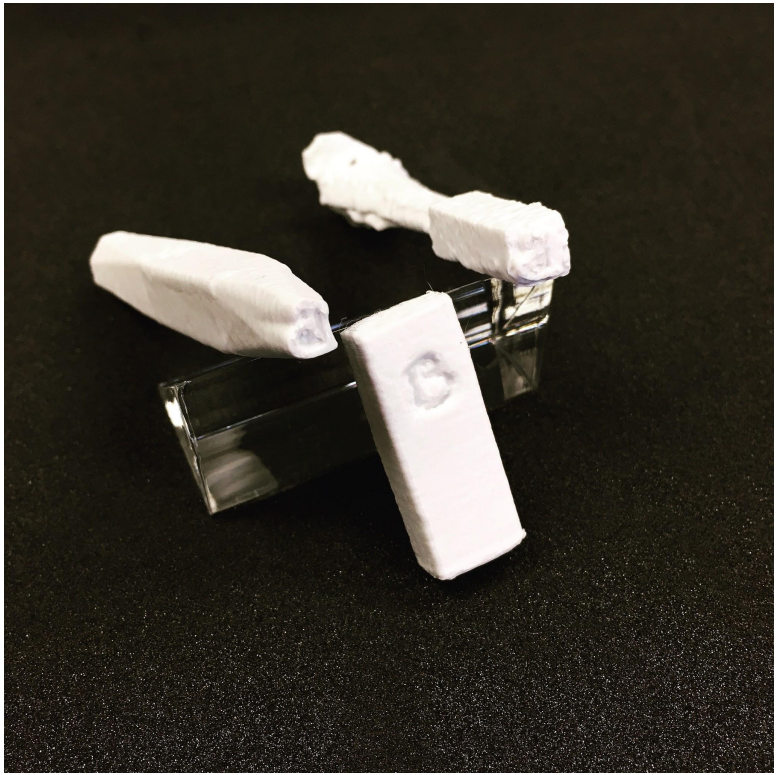


DETACHABLE JET PIECE

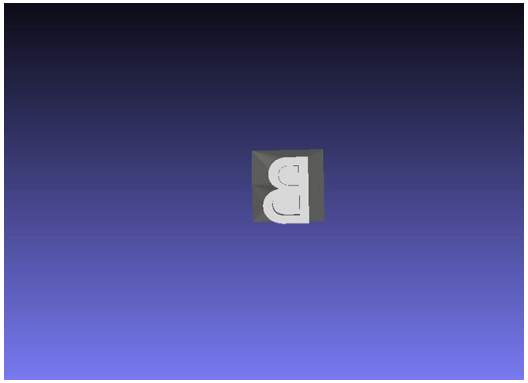
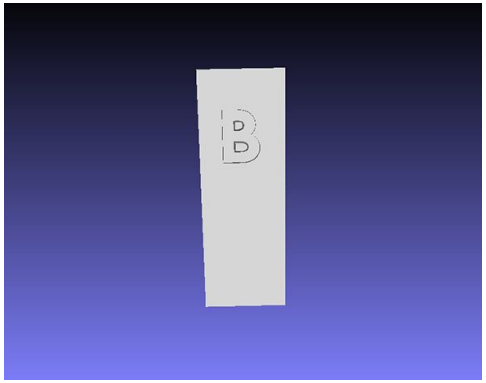
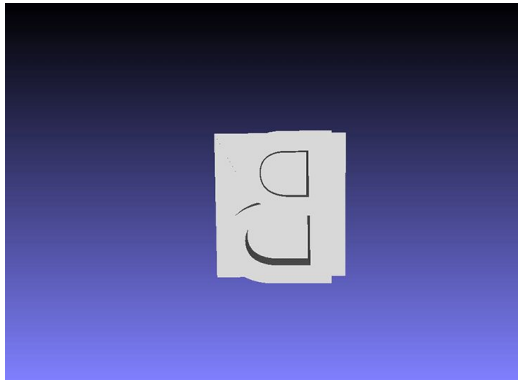
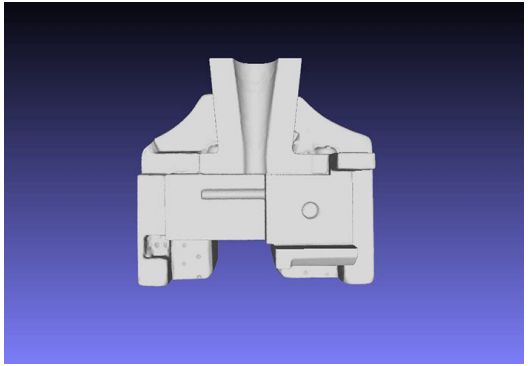
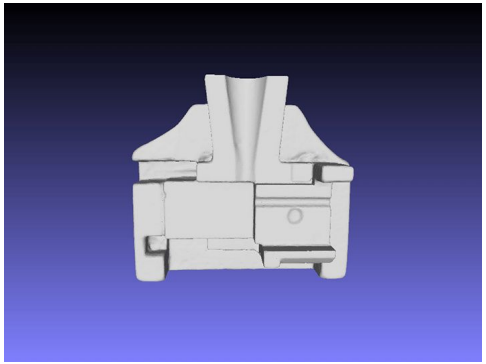
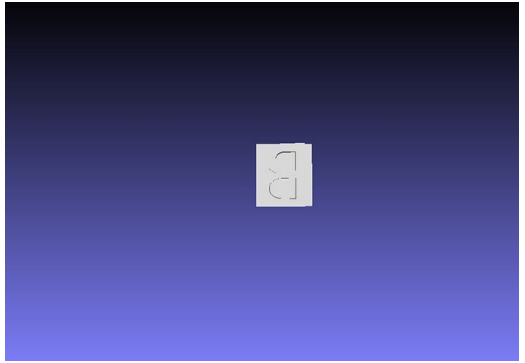




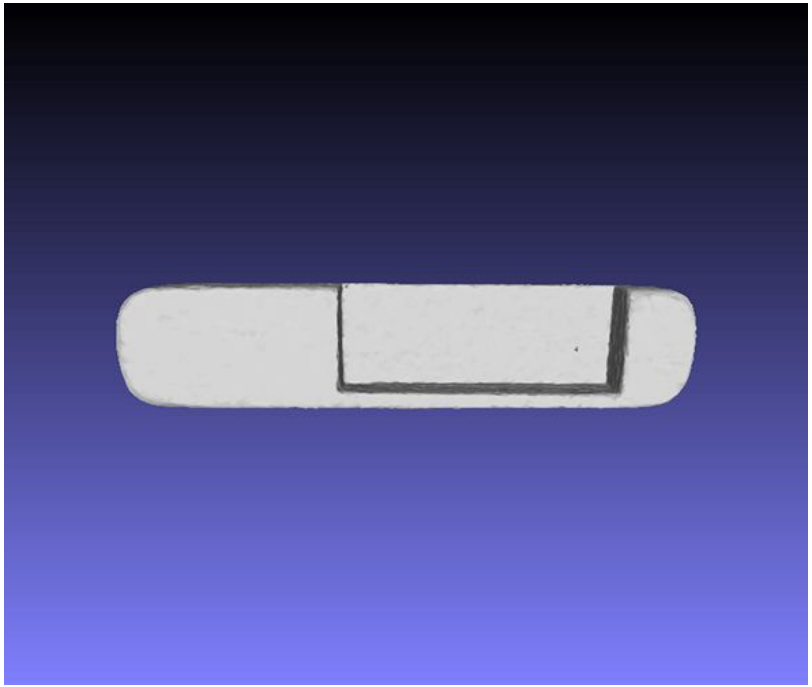
SCANNED PRINTS vs MODELED PRINTS



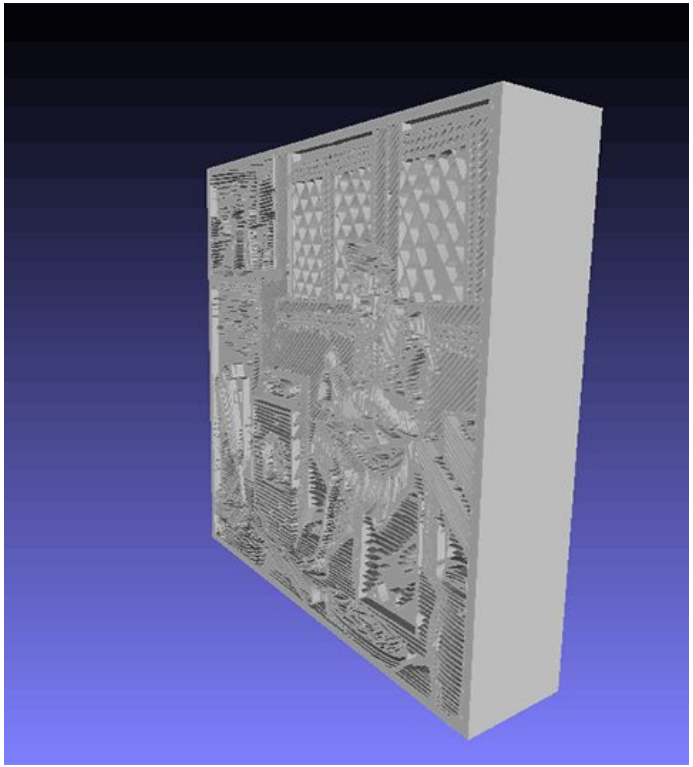
3DHOTBED TEACHING TOOLKIT

ADDITIONAL TOOLS - COMPOSING STICK



WOODCUT FACSIMILE

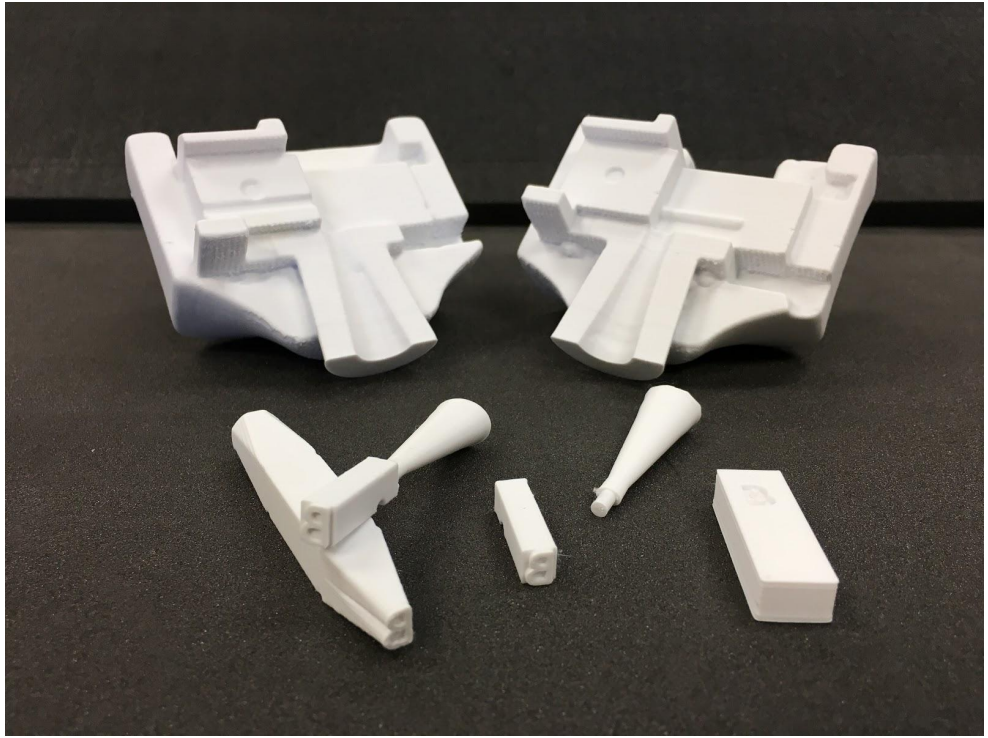


Der Schriftgiesser (type caster) from Sach and Amman's *Das Ständebuch.* Germany, 1568.

3DHOTBED TEACHING TOOLKIT

https://digital.library.unt.edu/explore/collections/THREED/

- Available as a complete set or individual data sets
- Freely available in the UNT digital library
- Accessible through 3Dhotbed.info



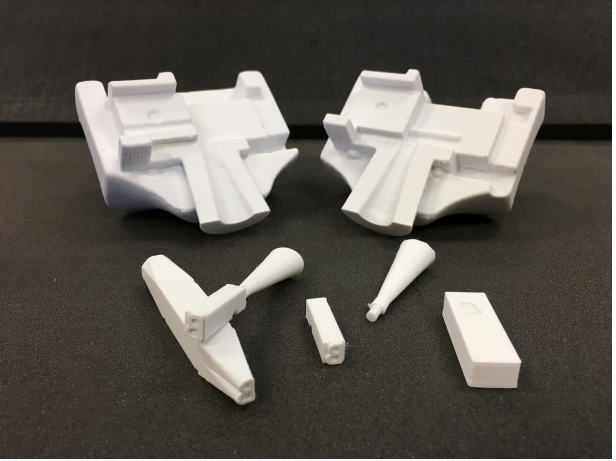
INTRODUCTION TO LETTERPRESS PRINTING

BOOK HISTORY MAKER FAIR

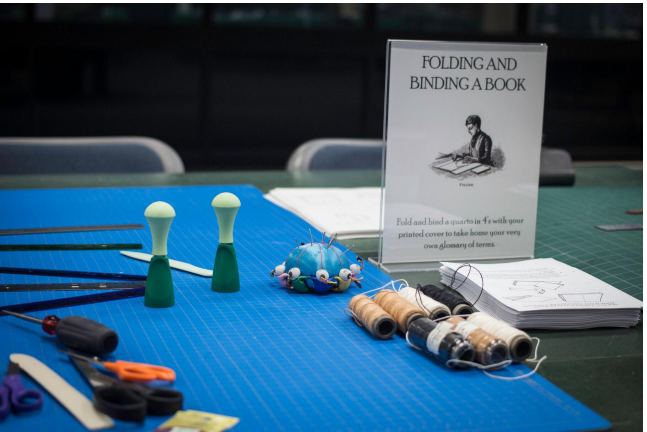
Event sponsored by the Digital Humanities and Collaborative Programs Unit of the Public Services Division of the University of North Texas Libraries, with financial support from the Critical Digital Pedagogy Faculty Network

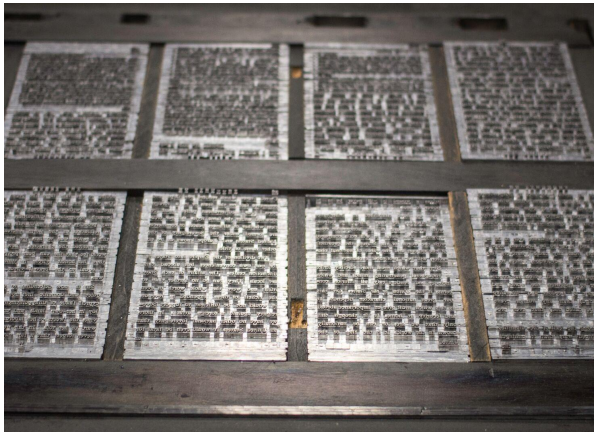
BOOK HISTORY MAKER FAIR

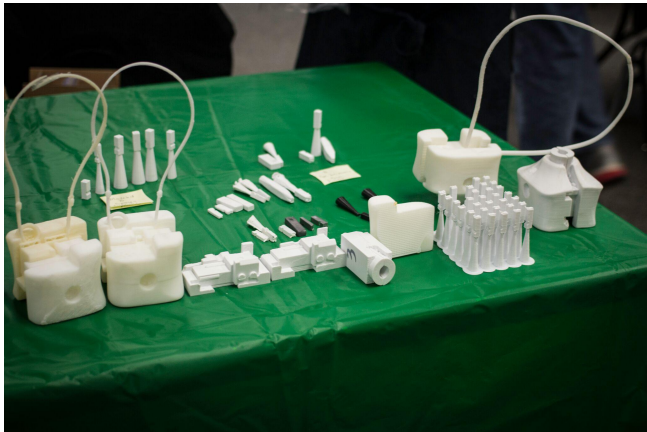
TYPE DESIGN
TYPE CASTING
SETTING TYPE
IMPOSITION
PRINTING
FORMAT
BINDING



CONNECTING 500 YEARS OF PRINTING HISTORY







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Get your data!

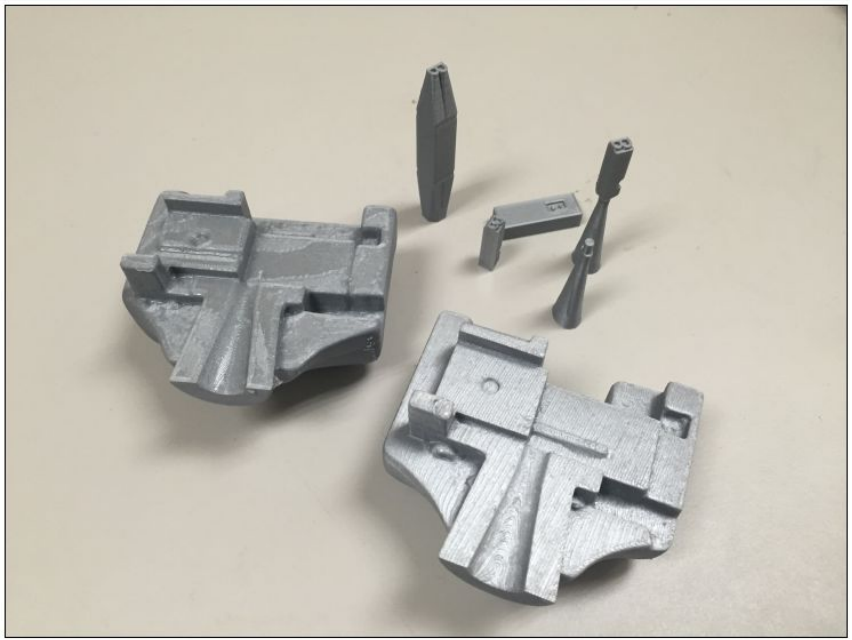
- UNT Digital Library
- 3dhotbed.info

Be our Partner!

- Print a toolkit
- Take the survey
- Tell us your thoughts
- Suggest more tools

https://tinyurl.com/3dhotbedprint

WE DID THIS COOL THING (AND SO CAN YOU)



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Thanks!

UNT Libraries Green Light To Greatness
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Bob's Hub from 3D Hubs
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UNT College of Arts and Visual Design Fab Lab

This presentation is also available at http://tiny.cc/Code4lib