

# 3-D PRINTING FOR COSPLAY

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An alternative method of prop making

# Who Are These People?



- **Samaru**

- Cosplaying since 2010
- Has won several awards for costume construction

- **rajamitsu**

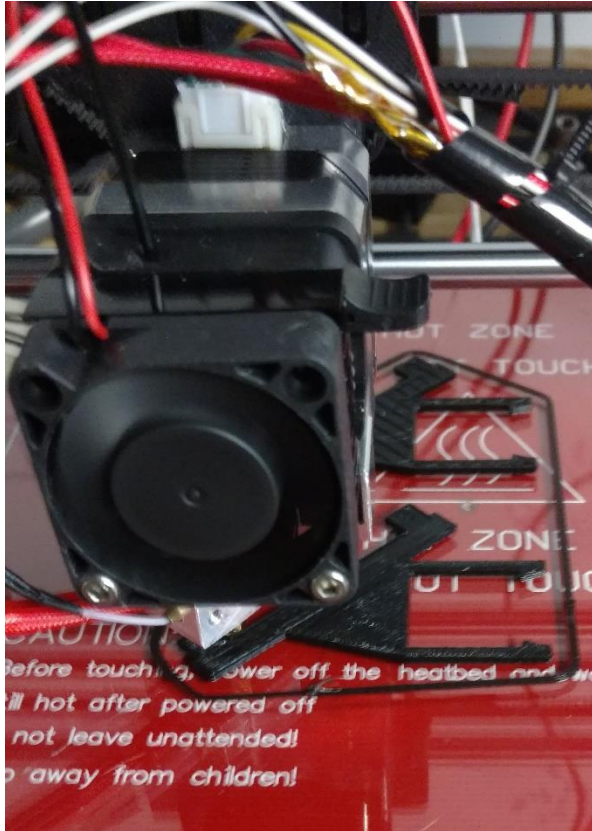
- Also cosplaying since 2010
- Does cosplay odds and ends, makes Samaru's stuff look good

# What is 3-D Printing?



- 3-D Printing involves creating objects by depositing layers of material to build up the object
- Used in rapid prototyping and one-off designs

# How Does a 3-D Printer Work?



- Deposits a thin stream of melted plastic to create shapes.
- Printhead moves back and forth (X & Y) across a build surface to slowly build up an object.
- Printhead is then raised and the process begins again

# Uses and Limitations

- Can create complicated shapes easily
- Useful to make multiple exact copies
- Size of finished objects is limited by print area
- Time and cost
- Finished objects WILL require additional finishing

# Where Do I Start?

- **Commercial Printer**
  - Easiest method to start
  - Highest initial cost
  - Best support
- **Printer Kit**
  - Great for those with technical interest
  - Lower up-front cost
  - No support
- **Printing Service**
  - Can print objects without owning a printer
  - Low up front cost but prints are expensive
- **Some Libraries, Universities, & Other Makerspaces**
  - Not available everywhere, check for cost and limitations

# Printer Filament

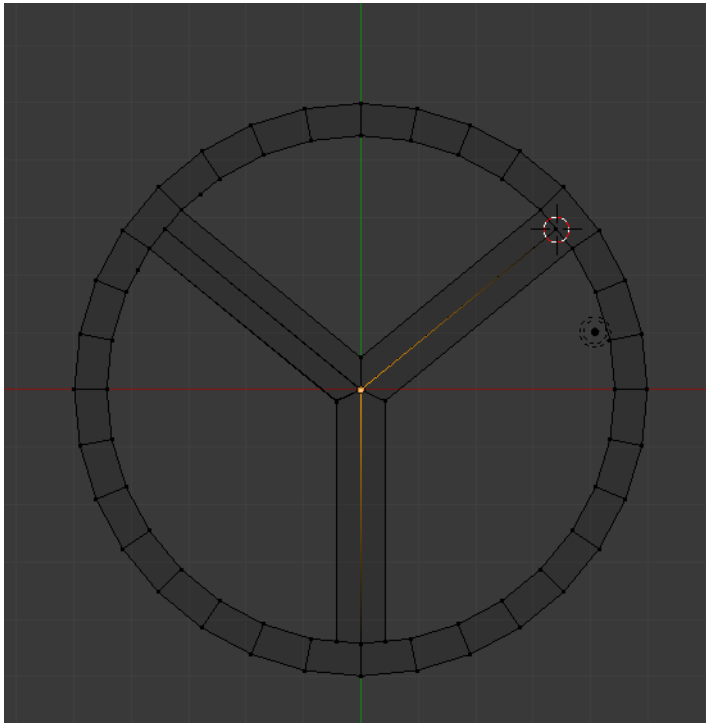
- Filament is the plastic used to create the final print
- Wide variety available
  - PLA
  - ABS
  - PET
  - Others

# Obtaining Your Models

- Model Repositories
  - Created model ready to print
  - Limited selection, but new stuff popping up all the time
  - [www.thingiverse.com](http://www.thingiverse.com)
- Creating Models
  - 3-D CAD/Blender
  - Must have modeling skills
    - (Or know someone who has them and is willing to make something for you, of course!)

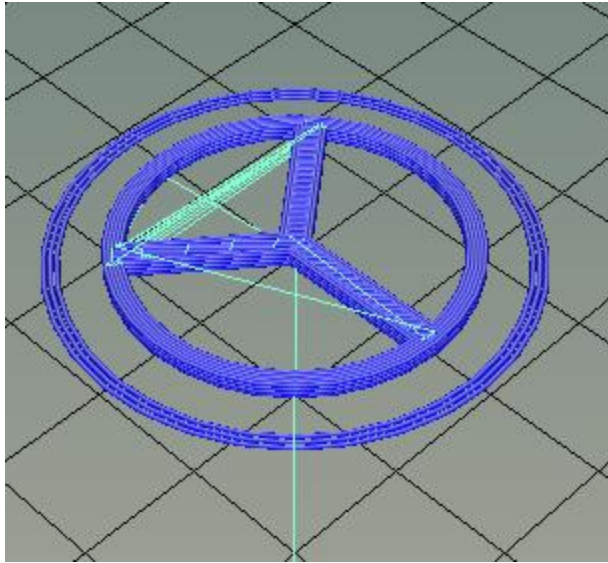


# Modeling Workflow



- Create a model using the 3-D program of your choice
- Be sure that the resulting model is manifold (watertight)
- Keep in mind that small details may not print clearly
- Export from modeler, slice, and print!

# Preparing to Print



- Model must be sliced before printing
- Many programs to do this, I use Slic3r
- Sliced model is loaded onto SD card to print or sent to printer using interface program such as Repitier Host
- You may need to clean up your file!

# Home Printing Tips

- Make sure your printer is located in a well-ventilated area
- Never leave printer unattended
- Ventilation
- Temperature control
- Allow plenty of time for printing
- Did we mention ventilation?

# Finishing



- Completed prints are far, far from finished!
- Bondo Putty
- Epoxy Coatings (Smooth-On)
- Acetone (ABS only)
- Test for compatibility

# Questions/Comments?

SamaruCosplay on  
Facebook

- In-Progress Pictures

SanddiverStudios.com

- In-Progress Pictures
- Costume Summaries
- Panel PDF Files
- Panel Feedback Form