HowTo use our 3D Printer

Creating a 3D Object

Choose a CAD or 3D Software which can handle stl files (examples: MeshLab, Blender, Bricscad, QCad, FreeCAD, VariCad, Open CASCADE, Cycas CityEngine, BRL-Cad, Draftsight, LibreCAD, ...)

Create your 3D model and save it as STL file.

You can also have a look at the makerbot `thingiverse` library - where you can find free (gpl licensed) 3D models ready for printing: http://www.thingiverse.com/

If you want to share your CAD models with the group (or if it is more often used) add your STL file(s) to following repository:

```
ssh://iis.uibk.ac.at/projects/git/CAD-models
```

Makerware and 3D Print Files

To create 3D print files you have to use the original Replicator 2x software: makerware (Download: Makerware)

1. start Makerware
2. **SELECT CORRECT 3D Printer**
3. MakerBots → Type of Makerbot → The Replicator 2x

Import your STL file in Makerware and use the following settings as default for print-file export (object without quotes refers to the imported stl file; “Object” refers to the menu point):

1. move object to platform (select object → selct “Move” → “On Platform”)
2. place object a bit to the front
3. select object → “Object” → select Extruder “left”
4. select “Make”
5. Export for “The Replicator 2X”
6. Select Left: “Makerbot ABS”
7. Resolution: Standard
8. Raft: “Left Extruder”
9. Supports (only if you have overhanging parts in you object): “Left Extruder”
10. Quality
    1. Infill: betweeen 10% - 40% depending on how stable your object should be
    2. Number of Shells: 2
    3. Layer Height: 0.15mm
11. Temperatur:
    1. Extruders: 233
    2. select “Heat Build Plate”
    3. Build Plate: 116
12. Speed:
    1. Speed while extruding: 70mm/s
    2. Speed while traveling: 150mm/s

Save the x3g file on a FAT formated SD-Card. The SD card used with your MakerBot Replicator x2 must be formatted FAT16 with a maximum capacity of 2GB. Put the SD-Card into the printer and select your file to print.