

Guidelines for 3D-Printing

Purpose of this document

The purpose of this document is to propose a set of guidelines for anyone that wants to use one of our 3D-printer for making parts. The guidelines apply for both employees and students from IFI, as well as external people, organizations/ projects etc.. The document is primarily for internal use within the ROBIN group and its related projects, although outsiders may read it when they want to have something printed.

About our lab organization

The Robin labs are DIY based. This means that we do have labs with rapid prototyping equipment, such as 3D-printers and milling machines, but we do not facilitate any 3D-printing service or prototyping service. Anyone that are allowed to print objects in our labs will have to obtain a certain minimum knowledge about the machines and their processes prior to using our equipment here. All users are on their own when it comes to creating their design, printing and post processing their models. Accidents and errors from the machinery, are to be reported to our staff, but problems due to design errors or misuse use are basically the users own responsibility to fix.

About the 3D-printers

Currently we have several 3D-printers, ranging from advanced hobby machines such as ultimakers to industrial machines such as the Fortus 250, and the Connex 500.

The machines as suited for making prototypes up to a certain size. They build their models layer by layer using support material to gap bridges in the design. The machines have different build speed, accuracy, materials and cost of materials. Different builds may take from approximately one hour to build up to several days, depending on size, volume and orientation. Description of how the printers work, and tips on how to design for 3D-printing is written in the 3D-design section of our wiki:

<http://robin.wiki.ifi.uio.no/Hovedside>

General prioritization

Whenever prioritization for the use of a 3D-printer is an issue, we will normally prioritize as follows:

1. Designs from employees in our group
2. Designs from our master students or attendees of the inf4500 course
3. Designs from other students or employees at the Department of Informatics
4. Designs from other departments within the University of Oslo
5. Designs from colleagues at research facilities around the world.

Prints that are interfering with our course activity may be stopped and removed without further notice.

We do not print for commercial purposes or private companies.

Cost of printing

Cost of use is closely related to the amount of build and support material used, and the printer cost printer rental. For prints outside ROBIN we may ask for compensation for materials used (including support material disposables or chemicals used, such as gloves, isopropanol, caustic soda etc), printer rental, engineer support and room cost.