

Fab Lab's Key Terms & Concepts

General

- **Open-Source** – The belief in free access to and redistribution of the design processes and details of a given project.
- **Peer to Peer Network (P2P)** – A filesharing system that allows users to download various types of media files from a network of computers connected by filesharing software and an internet connection.
- **Workflow** – A sequence of operations used for a particular process.

Software

- **User Interface** – The platform of interaction between a user and a program or machine.
- **Graphical User Interface (GUI)** – Commonly referred to as a GUI (pronounced “Gooney”). A type of user interface where user commands are represented visually through graphics and icons as opposed to text.

Raster Image vs Vector Image

- **Raster Image** – An image composed of a series of cells referred to as pixels. JPEGs are a common type of raster file. The resolution of raster images is measured in DPI (dots per inch).
- **Vector Image** – An image composed of a series of mathematically defined coordinates. This type of image does not have a resolution, and can be scaled infinitely without impacting the image's sharpness.

CAD/CADD

- **CAD/CADD** – Computer Aided Design; Computer Aided Design & Drafting.

FEA, FEM

- **FEA, FEM** – Finite Element Analysis, Finite Element Method. A method of dividing a complex calculation into a series of simplified steps. Particularly relevant in Fab Labs as this type of analysis is often embedded into design software, and geared toward non-engineers.

Parametric Design

- **Parametric Design** – Similar to but not necessarily FEA. Basically, the use of mathematical inputs to generate a variable response in a given system. For example, a modular system is composed of repetitive modules, whereas a parametric system may start off as a series of modules, but after feeding certain inputs into the system, each module will vary.

Equipment

- **CNC** – “Computer Numerical Control.” Machinery operated through computer programmed commands.

- **CAM** – Computer Aided Machinery, or Computer Aided Manufacturing
- **Toolpath** – A series of coordinates that directs the movement of a CNC tool.