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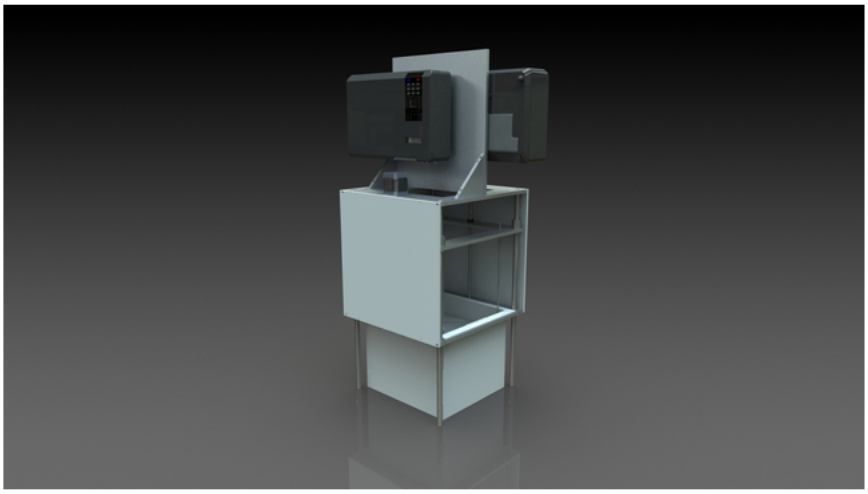
Project PAM – College Students Look to Create an Entirely Open Source DLP 3D Printer

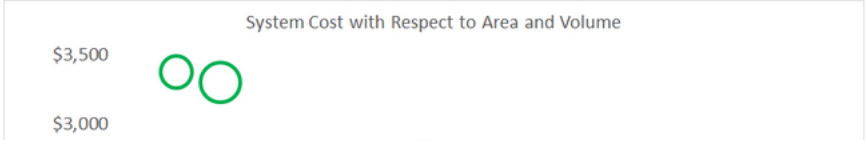
BY EDDIE KRASSENSTEIN · OCTOBER 2, 2014

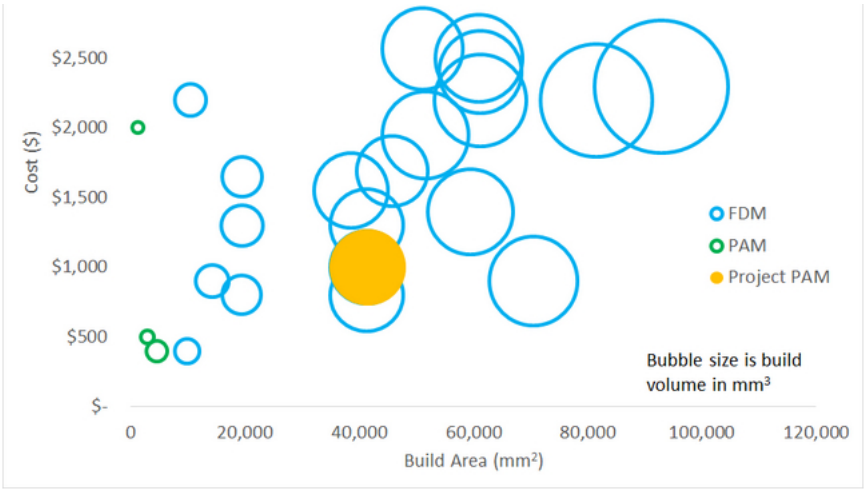
Open source has contributed to 3D printing in such a tremendous way. Without the open sourcing of many desktop 3D printers several years ago, the space would not be nearly as advanced as it currently is. Open source allows for brilliant people to take brilliant ideas and products, and then develop them further through the implementation of their own ideas. Open sourcing is not for companies looking to make huge profits, although it definitely still remains possible. Open sourcing is meant for those individuals who believe that the ideology behind technology should be for the greater good of mankind, not for the profits on certain individuals. We have seen many companies originate as part of an open source movement, only then to slowly migrate into closing off the rights to their designs, through the filing of patents and other means.



A team of undergraduate students at Southern Illinois University (SIU) Carbondale sees open source as a way to expand the use of 3D printing to those all around the world. They set out to create what they say is the "world's first open source hardware DLP 3d printer". Whether this claim is true or not is debatable, but that's not the important part here.

Project PAM, as the group of students calls it, stands for 'Photoresin Additive Manufacturing', and it started out as a senior design project. Unfortunately for the students, the SIU Engineering Department would not provide them with the funding needed in order to create a working prototype. Because of this, they have elected to launch an Indiegogo campaign in order to raise the $2,500 needed to go forward with this project. If they are successful in gathering the funding needed, they will use it to create a prototype which showcases a hardware configuration that will hopefully prove their design works. Any funds left over will go towards hopefully creating a student makerspace at SIU.





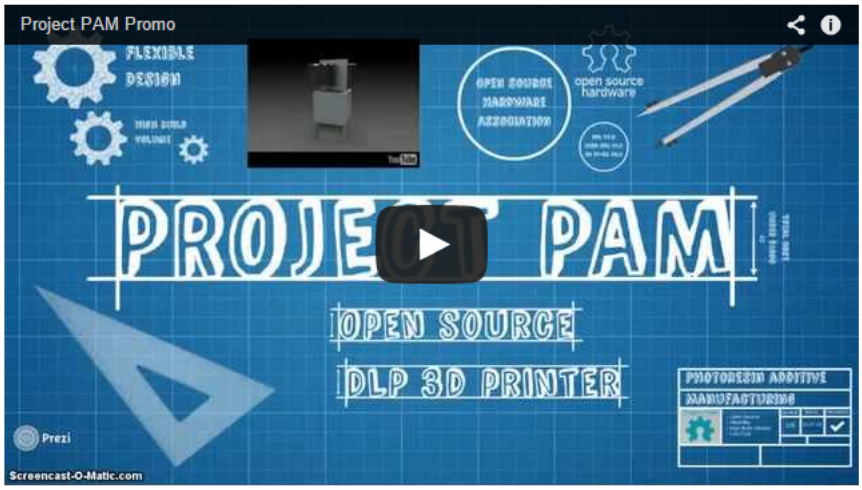
There are several tiered levels for backers to choose, ranging from $5 for a 'thank you' note, to $25 for a key chain, $250 for the complete documentation on how to create the printer from scratch, all the way up to $1500 for the full kit and documentation. The full kit will include everything needed to assemble the printer, except for the DLP projector which will need to be purchased separately from another vendor.

If all goes as planned, the team hopes to be able to create this 3D printer, release the documentation for free, and let others build upon it, to make it the best possible DLP 3D printer available. As for the open sourcing, the licenses that Project PAM uses are as follows:

- Hardware: CERN OHL v1.2
- Software: GNU GPL 3.0
- Documentation: CC BY-SA 4.0

Unlike most DLP 3D printers on the market today, Project PAM's 3D printer features a relatively large build volume of 9 liters. To build the printer without the kit, most parts can be sourced from Amazon, Adafruit or other industrial supply stores. $2,500 is not a lot of money to raise, so hopefully they are able to achieve this goal. It will be nice to see a truly open source DLP 3D printer out there that hackers and makers can continue to modify and improve upon. This may just be the start of something revolutionary.

What do you think? Have you supported this project? Discuss in the Project PAM forum thread on 3DPB.com. Check out the Project PAM video below:



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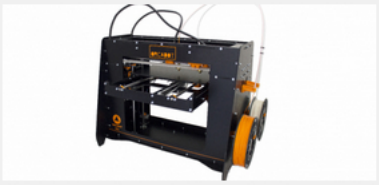

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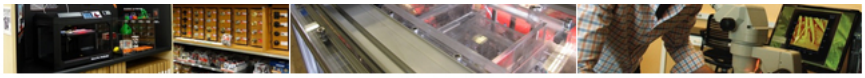

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