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| Project PAM |
| Project PAM  A Reference Design for  Photoresin Additive Manufacturing  for the  Saluki Makerspace  Saluki Engineering Company  Reference Number: S14-75-3DPR  Chance Baker (EE)  Jeffrey Burdick (ME)  Nicholas Lowman (CE)  Daniel Olsen (CE)  Casey Spencer (EE) |

April 18, 2014

Saluki Engineering Company

Southern Illinois University Carbondale

College of Engineering – Mail Code 6603

1230 Lincoln Drive

Carbondale, IL 62901

Steven Blair, President

Saluki Makerspace

Southern Illinois University Carbondale

College of Engineering – Mail Code 6603

Room E0021

1230 Lincoln Drive

Carbondale, IL 62901

Dear Mr. Blair,

On behalf of the Saluki Engineering Company, I would like to thank you for including us in the bid for a project to design a digital light processing printer. Attached is our proposal, *Project PAM*, project number S14-75-3DPR.

*Project PAM* proposes a reference Photoresin Additive Manufacturing (PAM) system which maximizes accessibility to the hobbyist. It is intended to be flexible by allowing for configurations of hardware available or easily obtainable to the end user. This is achieved through extensive use of currently available or easily fabricated hardware and open-source software. The reference design will be open-source hardware and software to the lowest practical level. Thorough documentation will provide the necessary means for the end user to go from an empty table to a functioning printer.

Please feel free to contact me at (815) 214 9661 or by email, [burdickjp@siu.edu](mailto:burdickjp@siu.edu), if you have questions about this project.

Sincerely,

Jeff P Burdick

Project Manager, *Project PAM*

Saluki Engineering Company

Executive Summary: Project PAM

With the increasing demand for a high precision desktop three-dimensional printer, the use of digital light processing (DLP) printing is growing. Currently, this technology is not easily accessible to the hobbyist or open-source community. Existing DLP printers are costly and are not within the budget of the hobbyist.

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The project will be completed in three phases: build phase, testing phase, and presentation phase. The build phase is expected to be completed by September 26, 2014, allowing for several weeks of testing and tuning before the demonstration during the week of December 1, 2014. The total cost of the project is not expected to exceed $1000.00.

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