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.

*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.

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.