

Statement of Work

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Much of the physical material necessary for this project is extant lab equipment used by the Physics Department for various research and educational purposes. However, much of the software that is specific to this project is proprietary and thus incur licensing fees. Furthermore, learning the domain and actually writing signal processing procedures using this software will have cost measured in man-hours. Deliverable items are: learning the domain, write simulation software, make improvements to existing codebase, and finally write software for real-time SPIFI imaging, in that order. A breakdown of the estimated costs and expected delivery dates can be found in Table 1. The cost of learning the domain knowledge can be estimated by the number of hours it takes for me to do so, and my hourly wage as a software developer (roughly \$44.00 per hour, or \$352.00 per week given that I spend 8 hours per week on it on average). Currently, five weeks have gone by, and it's estimated that a further two will be spent on this, resulting in the given total. The development of simulation software to aid in system design will take a large amount of time to write. While currently the plan is to write the simulation in a free and open language, much of the existing material that will be built upon is written in Wolfram Mathematica, which has a license fee of at least \$1150.00 and code written in that language typically cannot be viewed without it. Simultaneously, code written in C# for existing systems will be improved upon. This requires the use of Microsoft Visual Studio, which has a \$500 licensing fee, which only runs on the Microsoft Windows Operating System, itself having a licensing fee of at least \$120.00. While and after these goals are being met, I will develop Real-Time SPIFI imaging software, using only free and open technologies.

Deliverable	Expected Delivery Date	Estimated Cost
Domain Knowledge	Oct. 21 2016	\$2464.00
Simulation Software	Mar. 10 2017	\$8190.00
Improve Existing Codebase	Mar. 10 2017	\$7660.00
Real-Time SPIFI Imaging	May 26 2017	\$9856.00
Total	May 26 2017	\$28,170.00

Table 1: Deliverable Timetable