The Exhibit Backup System was facilitated by Kyle Heath which is currently implemented at the Vermont Internet Crimes Against Children Task Force of Burlington, VT. This is a reflection of the process for the completion of the project.

In March of 2011, Jonathan Rajewski had mentioned positions opening up at the LCDI as the building had finally come to fruition and in less than a few months, we would be moving ourselves down there. In the meantime, positions were available to students that applied in the spring to work before getting into the lab at Lakeside. I was selected to do a project for Vermont Internet Crimes Against Children (VTICAC). The project included researching and creating a storage solution proposal to give to the commander down at VTICAC for them to use as backup for their case work.

After coming up with three separate networkable storage solutions, I wrote up a proposal to fill the guidelines they were looking for. I was given a $5,000 budget to work with and it needed to house 30 TB worth of data. I created first a custom built system that would include multiple hard drives and a 30 TB RAID structure to be accessed like a NAS system. I also happened across a system by the company Data Robotics, called the Drovo. The third solution I came across was something Mike Wilkinson had mentioned he had used in the past. It consisted of a server with many Blu-ray burning drives in it as opposed to many hard drives. The system would burn the evidence to Blu-ray discs and be able to be stored in lockers on site. In the end, VTICAC chose the Drovo setup since for the money it cost, it provided the easiest and most scalable solution.

The Drovo plan consisted of purchasing 16 2 TB hard drives and two Drovos to store them. Drovos come with a built-in pseudo RAID that Data Robotics dubs their “Beyond-RAID” technology. It makes it so that you can hot swap out a hard drive and replace it with a bigger drive without incurring any data loss. As well, it provides reliability in that if a disk drive fails, it is able to distribute the data throughout the other disks until the faulty drive is replaced. The two units are actually even rack mountable and can be placed into their server room.

About 3 weeks after getting the quote out to them, I had two Drovos on my desk at work with all the hard drives and got to toy with them to understand how they worked. It was my duty now to figure out how to best use and implement it for them. After a couple weeks of making it work over an ad-hoc network I created with a personal switch I happened to have, I had myself a pretty decent understanding of how to set it up. I created a large manual about how to use it and set it up for network access.

The Drovo devices are still in use down at VTICAC and when problems arise that are outside the scope of the initial manual I created, I am still on call for any issues that they may be having with it.