MIRA Project Technical Details

In order to complete the MIRA project Richfield Rotary relied on the technical expertise of Richfield Rotary Member Denny Fox. Because of him we were able to take a bare bones idea and make it into a project that literally changed lives of many families. Below is an explanation of the steps Denny undertook to make it all happen.

The bare computer system units donated by Haworth Marketing + Media are four similar models of Dell business class systems. They were supplied with the hard drives wiped clean. Only the newest model was licensed as purchased with the Windows 7 operating system. All the older models needed to be updated from Windows XP to Windows 7. In addition, it was determined that the students would be trained on the latest Microsoft Office suite, Word, Excel, Publisher, etc. These upgrades were made possible at very reasonable cost through an organization called Techsoup that facilitates software donations from companies like Microsoft to qualified non-profits.

Denny guided Mira to become registered with Techsoup, created the email structure to communicate with Techsoup and created a matching account on the Microsoft Volume Licensing site. Software donations are requested from Techsoup and once the nominal fees are paid, the request is passed to Microsoft. After Microsoft approves the request, they generate a license and product keys for the requested software. The software is then downloaded, installed, and the license keys entered to make them legal system copies. Each system used in the Mira computer lab, office, or distributed to students must be legally licensed.

Loading operating systems and the Office suite from scratch on 40-50 systems is a very time consuming project. However, Microsoft supports a method of setting up a "master" system with all the applications that you wish to distribute, then preparing that system to be imaged to an external hard drive. The image can then be cloned to as many similar models as necessary. When a clone is started up for the first time, it is just like taking a new system out of the box.

Denny did all the technical work of creating the "master" units for the four models of Dell systems. This involved installing and licensing Windows 7 from scratch, installing the appropriate device drivers from Dell, installing and licensing Office 2013 Professional, installing all the other utilities and applications that would be required. Anti-virus and malware detection software was also included. After the master units were set up they were prepared for imaging, then imaged to a large external hard disk. After the images were created, they were cloned to ten systems for the Mira computer lab and office. Another batch of systems was cloned for distribution to the students of the Mira computer literacy class.

The images will continue to be used to clone additional systems for distribution to Mira graduates as time goes on.

Denny has documented this process, and trained Mira staff to clone and support this operation.

This project has been active since November 2013 to March 2014, and has involved over 300 hours of technical work.