THE COMPUTER CORNER

No. 250: Reminiscing – The ORC Computer Course.

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Did you know that the ORC had a computer course? Yep, back in 2001 – 2003. Attended by notables such as Ken Christiansen (N9WH, SK), Nels Harvey (WA9JOB), Ed Rate (AA9W), Tom Ruhlmann (W9IPR), Kevin Steers (K9VIN), Dick Scarvaci (K9CAN, SK), Gabe Chido (WI9GC), Vic Shier (now WT9Q), Mike Matthies (WJ9O, SK), Gregg Lengling (W9DHI) and others. One adult offspring of a member took the course and later became head of what we now call Information Technology at a major corporation. The course seemed to fill a need for her in the work world, and for the others to help them understand and use computers.

Each of the 8 sessions had a lecture, a lab, readings in an assigned text (Mueller's Upgrading and Repairing PCs) or other homework, and often there was a demonstration. For example, the first lecture was on hard drives, their types, master/slave, MBR, FAT, partitioning and formatting, and hard drive physical characteristics (platters, heads). The first lab had pairs of students (two to a machine) partition and format a previously wiped hard drive, then add MS-DOS 6.22. Everyone had to show they completed the task by having the hard drive boot properly. The instructor demonstration was to show a running hard drive with its cover removed, followed by having the drive seek files at the beginning or end of a platter, so the students could see the heads moving to each site and watch the screen for what the heads found. For homework, each student took home a hard drive to completely disassemble it into its components. At the next class, they had to be ready to explain what each component did in the function of the hard drive.

The second session was on components – motherboards, controller cards such as video and sound, serial and parallel ports, USB and Firewire. The lab was to completely tear down their lab computer, then build it back up again and demonstrate that it could boot up. Some troubleshooting was included. And the POST and CMOS setup was demonstrated.

Third, the lecture was on memory, SIMMs, DIMMs, type and installation, and memory management. The lab was to install Windows 98se and to make a startup disk. Also, to modify Windows to boot directly into DOS. The instructor demo was to bench setup a motherboard with a power supply and have it start, and demo checking voltages. Homework was to completely disassemble a CD-ROM drive. As was the case with the hard drive disassembly, students had to be prepared to explain what each part did.

The fourth week lecture was on virology. Definitions and types, scanners and the like. In the lab, student infected the MBR of their machines with a virus (!Yep!) and then proceeded to sterilize it with FDISK.

The fifth week was on floppy and CD-ROM disks – type, installation and formats. In the lab, students damaged a floppy and examined the results. They also examined the contents of the Win98 startup disk. Homework was to completely disassemble a floppy drive, and be prepared to explain what each part did.

Sixth was maintenance backups, surge suppressors, UPS units and advanced troubleshooting. In the lab, tools for trouble shooting were examined (SYSCHK for DOS and System Tools for Win98).

Next was sound cards and how they work. In the lab, students investigated the utility of sounds in computing, and they also became familiar with the Windows calculator.

The eighth lecture was on software – Windows 98 and other operating systems. In the lab, students used FDISK to bring their hard drive to its original, pristine state. Then they tidied up Stan's computer workshop.

The required text was the only cost associated with the course, and students were free to get their book wherever. It was great fun for me and student feedback seemed to show it was worthwhile for those who attended. Happy computing!