

2009-04-26 Linux SIG

Peter Ireland demonstrated the Meraki “3-in-1” repeater device that he purchased on eBay and installed to improve our WiFi reception at the Pima County Medical Society. The PCMS building has 1.5 to 2 Megabits per second Internet access, while the Meraki units will handle up to 54 Megabits per second. The [meraki.com](http://meraki.com) website illustrates how the repeaters could be placed to provide an Internet connection throughout an apartment building. In a wireless “mesh network”, a Meraki repeater device needs to be placed about every 50 feet.



Meraki's Website indicated that new devices were \$149 each, but ours was \$50, a super deal that Peter Ireland found on eBay. An audience member asked how the devices knew which wireless connection to choose, i.e. PCMS or TCS. Peter explained that he configured them with the serial number and MAC address of each device. Then the device “calls home” to a database of all devices. The windows around the entrance to our meeting room at PCMS are safety glass with wires in them; This type of glass can interfere with reception of Wi-Fi signals. The new device should be unplugged and locked in TCS' file cabinet after meetings.

SIG leaders and presenters will have to refresh their wireless Internet connections of their laptop computers when starting them up. If they don't refresh, they are likely to have the old, much weaker connection to PCMS' wireless access point with very few bars. After refreshing, the reception improves as their computer recognizes the new wireless device. Dennis McCormick noted that Ubuntu automatically recognized the new Meraki device which provides TCS' laptop with a stronger signal than the one provided by PCMS' access point.



Paul Scott discussed the recent release of the ext4, which can provide dedicated contiguous sectors of hard drive space with large files to prevent disk fragmentation. These continuous areas of hard drive space are called “extents”. When installing Ubuntu 9.04, you must pick the manual partition option, since as the default option is to configure an ext3 partition. Paul and Dennis noted that members with a boot

partition, or using an Eee-PC should use ext2 because a boot partitions and solid state drives do not need journaling. For a boot partition or a solid state drive, journaling would be detrimental for performance and resource utilization. For solid state hard drives, journaling will wear them out faster since solid state hard drives have a finite number of reads and writes that can be done to each physical sector, before a particular sector becomes unusable.

Paul explained that the xorg.conf file has changed, and is almost empty for the current versions and derivatives of Debian Linux. You can no longer edit the xorg.conf file to change Xwindows settings. All configuration of the X-windows part of the “Desktop Environment” is now done from within the graphical user interface. Some distributions of Linux are also disabling the shortcut keys that allowed you to get rid of the graphical user interface when you wanted to edit the xorg.conf file from a command prompt.

Paul and Dennis demonstrated how to configure the sharing of files in a Windows XP computer with TCS's laptop running various versions of Linux. Paul noted that the Linux/Unix computers can communicate with Windows using Common Internet File System (CIFS) which was previously known as Samba. Screens for setup of file sharing in Windows and Linux were shown. It was discovered that Ubuntu recognized the wireless LAN while Kubuntu did not.

Harry Elver stated that the Meraki device does not allow file sharing since the wireless client computers that are communicating to a Meraki repeater do not have access to each other and hence they cannot do peer-to-peer sharing of files and printers. The Meraki system would not permit the residents of an apartment complex to see each other's files. Sharing of printers and files would have to be done through a router. In other words, the Meraki system is for sharing an Internet connection via Wi-Fi. It does not support peer-to-peer networking.