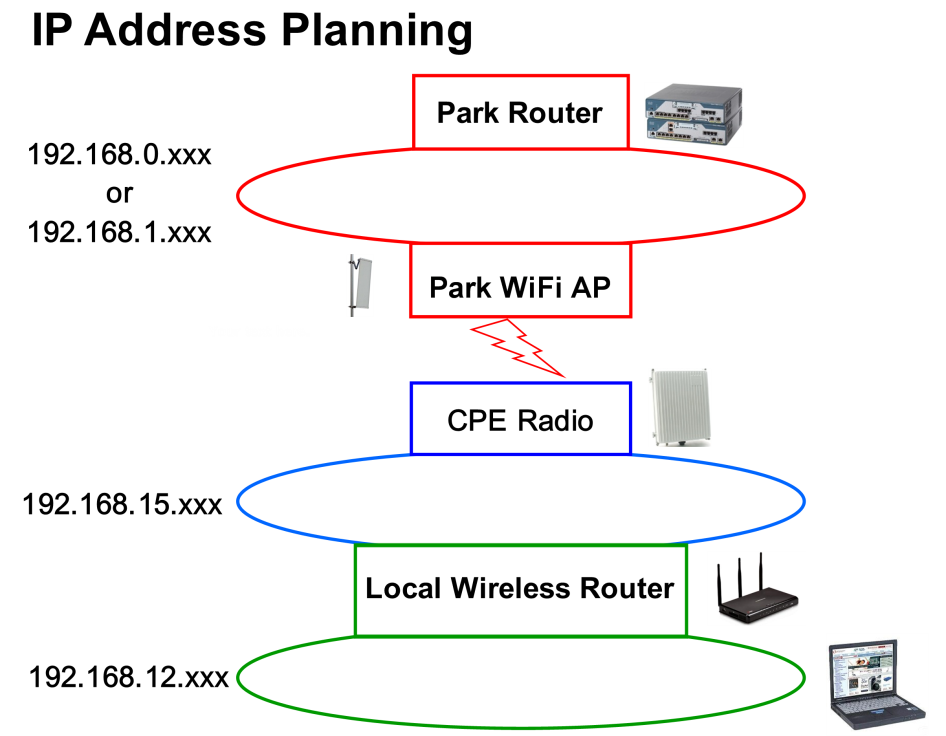
# Deliberant CPE-2 Setup

### IP Address Planning

To setup up a CPE (Customer Premise Equipment) radio, a very basic understanding of IP Addressing is needed. IP (Internet Protocol) address are usually displayed in the format of four octets in this manner: xxx.xxx.xxx.xxx. Each octet can have a value from 000 to 255.

For the purposes of setting up the CPE radio and the local wireless LAN (Local Area Network), we will assume that the first two octets will be 192.168. This octet pair is reserved in the Internet world for addresses that are only used locally.



We used loops to show a range of IP Addresses. When LANs were first implemented, they were like a loop. Today, an IP loop is either wire or radio waves that are direct but the loop helps in the concept of IP address ranges.

For our purposes, all devices on a loop have to have the same first three octets. We have already said that the first two octets will be 192.168. The 000 address (ex: 192.168.1.0) and 255 address (ex: 192.168.1.255) are reserved for special functions.

We will have three IP loops do deal with; the Park WiFi loop, the loop between the CPE Radio and your wireless router, and your wireless routers WiFi loop to your PCs. Each loop needs to have a different IP range in the third octet.

Most Park WiFi loops will have the address range of 192.168.0.xxx or 192.168.1.xxx. This is not a hard rule, just a general case. Some Parks will go to a different range like 192.168.254.xxx to get away from the common 192.168.0.xxx or 192.168.1.xxx ranges.

You get to pick the IP ranges for the WISP Radio loop and your wireless router loop. We choose 192.168.15.xxx for our WISP Radio and that has never been a problem for us. We choose 192.168.12.xxx for our wireless router loop and again that has never been a problem for us.

## CPE-2 Radio Setup

The Deliberant CPE-2 can be run in CPE mode which acts as a client to the Wi-Fi source (Park Wi-Fi). The CPE-2 can also act as an AP which broadcasts what your router can distribute. For example, if your router is connected to a Satellite Internet modem or a cable modem, the CPE-2 in AP mode connected to the router will expand the range of the router.

The steps to configure a CPE-2 in CPE and AP mode and the steps to change from one mode to the to the other, and some utility functions have been put into separate documents.

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| StepsToConfigueCPE | The steps to initially configure a CPE-2 with CPE firmware. |
| StepsToConfigureAP | The steps to initially configure a CPE-2 with AP firmware. |
| StepsFromCPEtoAP | The steps to change from CPE firmware to AP firmware with pre-established configuration file. |
| StepsFromAPtoCPE | The steps to change from AP firmware to CPE firmware with pre-established configuration file. |
| StepstoChangeYourIPAddress | The steps to change your PC’s IP Address. |
| StepstoCheckAnIPAddress | The steps to check if an IP Address is responding. |
| SteptoFindAvailableWiFiSource | Using the PE function to scan for Wi-Fi sources. |
| StepsForConnection | Using the CPE to establish a connection with a Wi-Fi source |
| Recover.cmd | A command file to recover the CPE if you cannot communicate with it. |