Wireless

Technology, Information Technology

A site survey begins with the physical layer, identifying whether access to the internet exists, and the location of devices needing access. Wired access to the internet is necessary whether that is through a T1 line or a cable modem. In a residence, it comes into the house as an Ethernet hub offering up DSL, along with cable television for instance. The cost for high-speed residential DSL, bundled with a phone line from AT&T runs about $60 a month, with no cable television reception.

A wireless router is then connected to the wired connection, which then creates the data layer, such as TCP, so that an IP address can be assigned. Each device on the network must also have a wireless network card in order to receive the wireless signal.

The network layer manages the communication from the Ethernet hub. The transport layer keeps the traffic flowing while the session layer keeps traffic moving between computers granted access within the network, such as the desktop computer and a file or a mail server. The application layer is where data visibly moves as characters or entire files between computers. 1

The greatest danger is interference from other radio frequencies such as radio-controlled toys. 2 The second danger is unauthorized access by other wireless devices. AT&T, for instance, provides firewall software that blocks access, sometimes to needed sites. Certain backup programs are prevented from functioning by the firewall. Encryption is used by most providers to protect their own users. Although, sites like Brookhaven National Laboratories' policy3 requires that all users register with BNL digitally but that BNL will not encrypt (or protect) the data of guest users. It is a strong

policy that protects registered users while granting reasonable limited access to visitors.