Summary

- Wireless LANs are fast gaining popularity
  - High-speed wireless connectivity augmenting wired networks
  - Combine data connectivity with user mobility
  - Strong popularity in vertical markets such as academia, offices
  - Home networking
    - Telecommuters, sharing peripherals, sharing broadband access, desire for mobile connectivity in the homes
- IEEE 802.11 (a & b variations)
  - a - 5GHz standard, OFDM-based, data rates up to 40Mbps
  - b - 2.4GHz standard, Ethernet-based, data rates up to 11Mbps
- HiperLAN & HiperLAN2
  - 5GHz standard, OFDM -based, data rates up to 54Mbps

Summary

- Various wireless LAN products are being developed
  - Residential gateways with wireless LAN for home networking
    - Broadband access choices - DSL, cable, satellite, ISDN
  - Technology bridges (several choices)
    - IEEE 802.11-to-IEEE 1394, IEEE802.11-to-HomePNA, IEEE802.11-to-Ethernet, HiperLAN2-to-IEEE802.11, HiperLAN2-to-IEEE 1394, HiperLAN2-to-HomePNA, etc.
  - WLAN (HiperLAN2 & IEEE 802.11 a & b) enabled information appliances
    - Digital TV, DVD player, Internet screen phones, PCs, printers, scanners, etc.

Summary

- Xilinx solutions enable wireless LAN-based products
  - Spartan-II + IP provides a better solution than competing ASSPs
    - Higher performance & cost effective
    - Greater flexibility is provided through reprogrammability
      - The WLAN market is rapidly growing & the competition is rising products need to be rolled out - time-to-market
      - IRL provides time-in-market as specs for emerging technologies evolve
    - Features within the Spartan-II provide system integration
      - DLLs, SelectIO, BlockRAM
    - Embedded solutions
      - FPGA logic not used from IP can be programmed with other IP cores
    - Proprietary encryption algorithms can be programmed in the FPGA depending on the application and geography
  - Spartan-II FPGAs, CoolRunner & 9500 CPLDs provide system interconnectivity in wireless LAN based products