CERTIFICATE OF COURSE COMPLETION

CCNA 1 NETWORKING BASICS

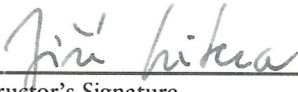Martin Kylian

Date : February 28, 2005

Instructor : Sitera, Jiri

Location : Pilsen

Academy Name : University of West Bohemia in Pilsen

Jiří Sitera

Instructor's Signature

During the CCNA 1 Course administered by the undersigned instructor, the student was able to proficiently:

- Define and install the necessary hardware and software required to be able to communicate over a network

- Demonstrate the mathematical skills required to work seamlessly with integer decimal, binary, and hexadecimal numbers and simple binary logic

- Define the structure and technologies of modern computer networks

- Define the meaning and application of "bandwidth" as used in networking

- Compare and contrast network communications using the OSI model and the TCP/IP protocol stack

- Describe the major properties and standards associated with copper and optical media used in networks

- Explain the concepts of transmission and reception of wireless signals used in networks

- Install a simple wireless LAN

- Explain the fundamentals of signal transmission on networking media

- Describe the different topologies and physical issues associated with cabling common LANs

- Describe the physical issues associated with cabling networking equipment to work over a WAN link

- Explain the fundamentals of Ethernet media access

- Explain how collisions are detected

- Explain the concepts associated with auto negotiation on Ethernet systems

- Describe the concepts of switching in an Ethernet network

- Compare and contrast collision and broadcast domains, and explain how networks can be segmented

- Demonstrate familiarity with all aspects of IP addressing

- Describe the association of an IP address with a device interface, and the relationship between physical and logical addressing

- Describe the principles and practice of packet switching within IP networks

- Describe routing concepts, and the different methods and protocols used to achieve them

- Describe how the protocols associated with TCP/IP allow host communication to occur

- Describe the fundamental concepts associated with transport layer protocols, and compare the connectionless approach to transport with the connection-oriented one

- List the major TCP/IP application protocols, and briefly define their features and operation