

CS640

Introduction to Computer Networks

DNS

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Prof. Lawrence H. Landweber

Prof. Jun Murai

Names and Addresses

- Host should be identified before communicating
 - A host is identified by unique IP address
 - A host is identified by unique Name (for user convenience)
- Names
 - variable length and mnemonic
 - easy for humans to remember
 - contains no information about the host location
- Addresses
 - fixed length
 - easy for computers to process
 - tied to routing

Name Space and Resolution

- Name Space
 - defines set of possible names
 - flat versus hierarchical
- Naming system
 - maintains collections of a set of name to value bindings
- Resolution mechanism
 - mechanism to get a corresponding value (IP address) from a name (Hostname)
- Name server
 - one implementation of a resolution mechanism
 - widely used in the Internet