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# **Lecture 3**

# **Design Philosophy & Applications**

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# Lecture Overview

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- **Last time:**
  - » Protocol stacks and layering
  - » OSI and TCP/IP models
  - » Application requirements from transport protocols
- **Internet Architecture**
- **Application examples.**
  - » ftp
  - » http
- **Application requirements.**
  - » “ilities”
  - » Sharing

# Internet Architecture

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- **Background**
  - » “The Design Philosophy of the DARPA Internet Protocols” (David Clark, 1988).
- **Fundamental goal: Effective network interconnection**
- **Goals, *in order of priority*:**
  1. Continue despite loss of networks or gateways
  2. Support multiple types of communication service
  3. Accommodate a variety of networks
    - » Permit distributed management of Internet resources
    - » Cost effective
    - » Host attachment should be easy
    - » Resource accountability