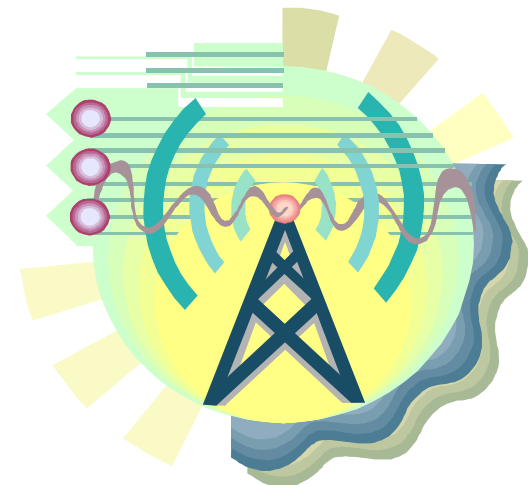


# Web Services: The Next Big Thing

William A. Estrem Ph.D.  
Graduate School of Business



UNIVERSITY *of* ST. THOMAS

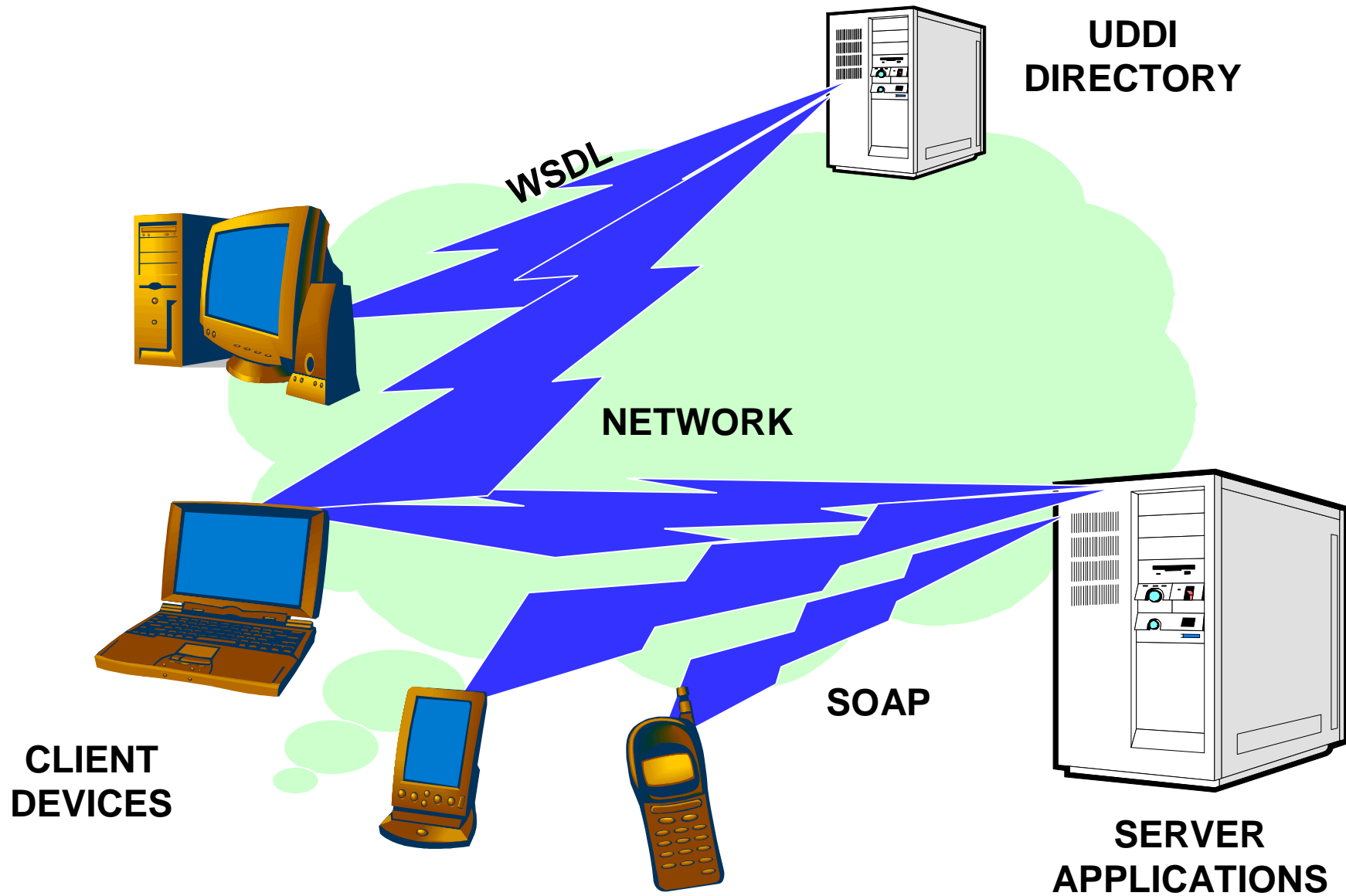
# Agenda

- Defining Web Services
- Key Benefits and Opportunities
- Key Challenges and Risks
- Customer and Vendor Perspectives
- Discussing Open Group's Role in Web Services

# Defining Web Services

- Web Services can be defined as standard application programming interfaces which leverage Internet and Worldwide Web protocols to expose application functions for remote execution
- In other words, they are another form of distributed computing...

# Web Services Architecture



# Key Benefits and Opportunities

- Enabling Heterogeneity
- Federation across the Value Chain
- Application to Application Integration

# Enabling Heterogeneity

- By leveraging web protocols, a high degree of interoperability is provided across platforms:
  - Hardware
  - Operating System
  - Applications Component Model
  - Applications Execution Environment

# Federation across the Value Chain

- Web services promote inter-organizational communications and collaboration
- Web-based protocols such as HTTP can pass through firewalls more readily than conventional remote procedure calls
- Organizations can exchange information more readily

# Application to Application Integration

- Web Services enable application to application communications
- A big step toward the Semantic Web concept



# Key Challenges and Risks

- Interoperability
- Security
- Performance and Scalability
- Immature Standards

# Interoperability

- Despite the interoperability provided by the basic web services standards, there are still areas where problems will be encountered
- Web services specify the interfaces but not necessarily the behavior of the application functions accessed

# Security

- As with other Internet and Worldwide Web applications, web services will be subject to malicious attacks
- Current Web service standards do not provide enterprise-class security
- Intranet-based web services applications will provide some degree of protection

# Performance & Scalability

- The SOAP protocol running on top of transports such as HTTP is not a high performance mechanism
- Other integration techniques can provide the performance needed for applications which require “heavy lifting”

# Immature Standards

- Web Services Standards such as UDDI, WSDL, and SOAP are early, immature, and incomplete.
- Conventional Web Standards such as XML, HTML are more mature and robust
- Will vendors comply to Web Services standards?
- How can they differentiate and add value without breaking interoperability?

The Great Thing About Standards Is That  
There Are So Many To Pick From...

# How Can Open Group Contribute to the Evolution of Web Services?

- Architectural Coherence (TOGAF, In<sup>3</sup>)
- Customer Requirements
  - definition and validation
- Sponsoring Technology Development
- Conformance Testing
- Certification and Branding

# Summary

- Web Services represent the next step in the evolution of distributed computing techniques
- Web Services are very early in their development, and therefore, there are risks that must be managed
- The use of standards as a basis for procurement of software has never been more important
- The Open Group can play a role.

# Steps of Action

- Bird's of a Feather session
- July Meeting in Boston
- Other...