What it Takes to Move to Client/Server–Is There Really a Silver Bullet?

Session 500

Issues and realities of client/server development and implementation

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Agenda

- Client/Server defined
  - The promise
  - The reality
- The driving forces of client/server
- What is required to be successful

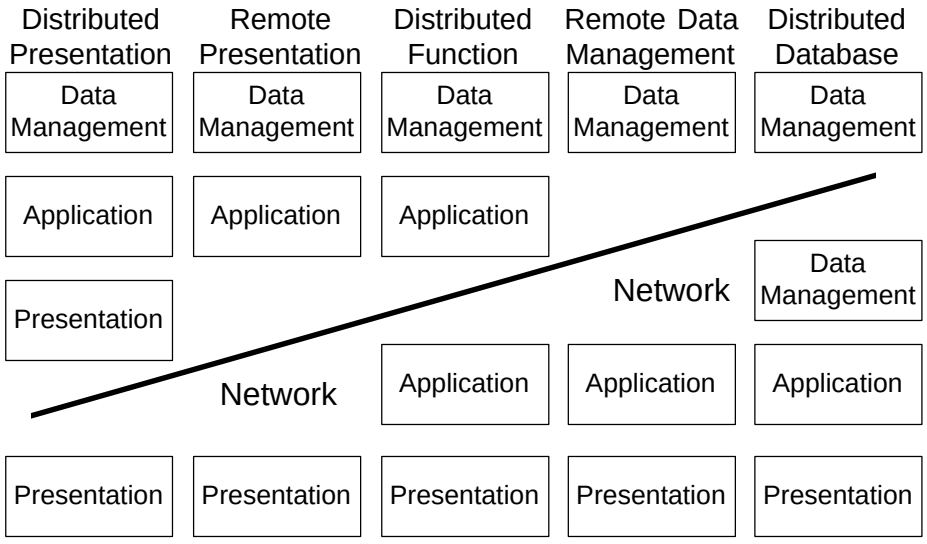
Client/Server Defined– What it is

- An application architecture
- A technical architecture
- Result of technological advances
- Facilitator of enterprise-wide computing
- Effective tool used in conjunction with Business Process Reengineering (BPR)
- Allows leveraging of emerging technologies
- Allows for and encourages open systems
- Represents evolution, not revolution

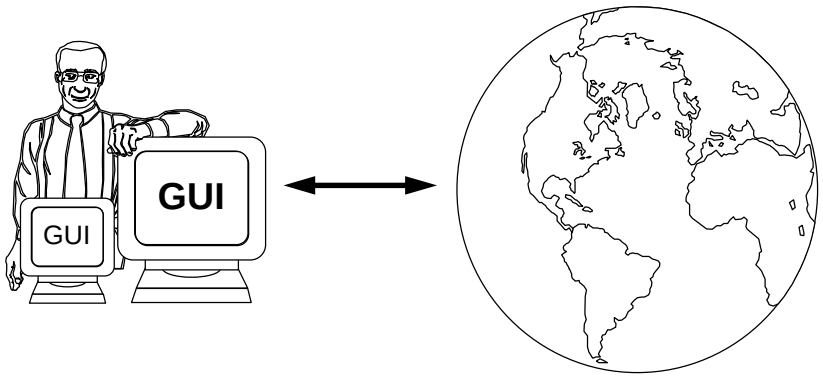
Client/Server Defined– What it is Not

- A silver bullet
- Easily managed
- Easily developed
- Does not have established “cookbooks” or cookie cutter approaches
- Appropriate for all types of applications
- One specific technology
- Technology-dependent
- Automatically implementable

Client/Server–What it is Not



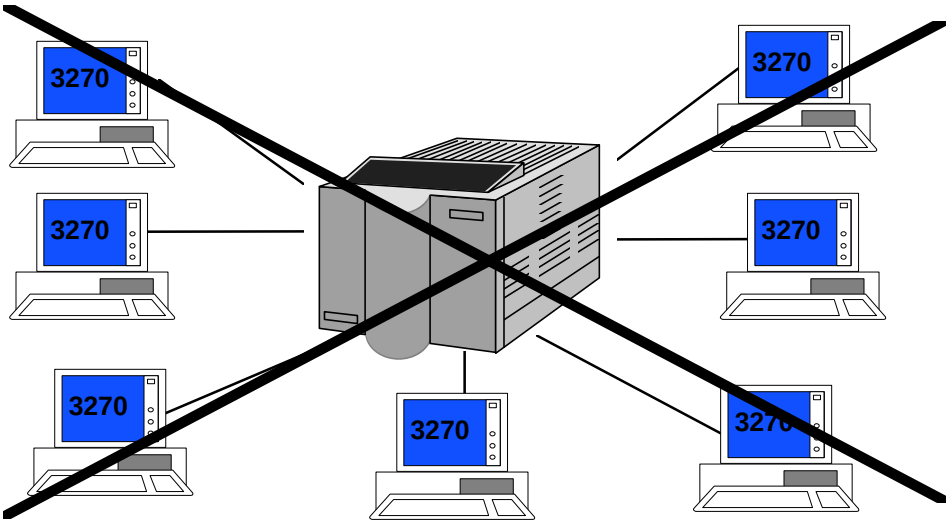
Client/Server–The Promise



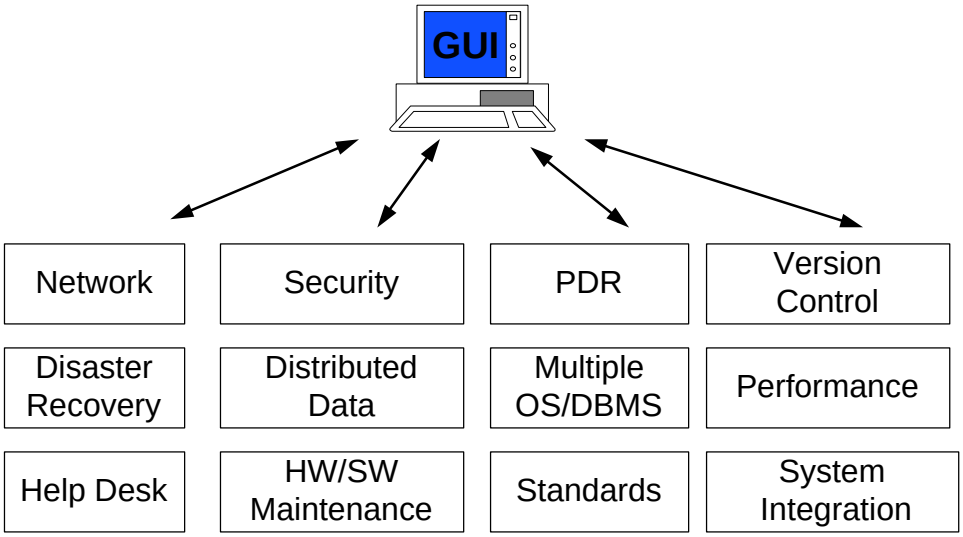
Client/Server–The Promise

- Ability to react rapidly to an ever changing business climate
  - Capitalize on business opportunities
- Allow a “single image” view of all information within the Enterprise
- Overall better use of existing and emerging technologies
  - PC’s actually being used for work
  - Empowerment of end-user community
- Improved workflow resulting in better, more efficient customer service

Client/Server–The Promise?



Client/Server–The Reality



Client/Server–The Reality

- The “single image” actually made up of different and possibly mutually exclusive technologies
- Requires expertise in Systems Integration
- Requires development staff to have expertise in many areas
  - GUI, Multiple Operating Systems
  - Communication, Networking
- Relies on an overall environment conducive to distributed computing to exist
- Experienced developers/managers/architects in high demand and short supply

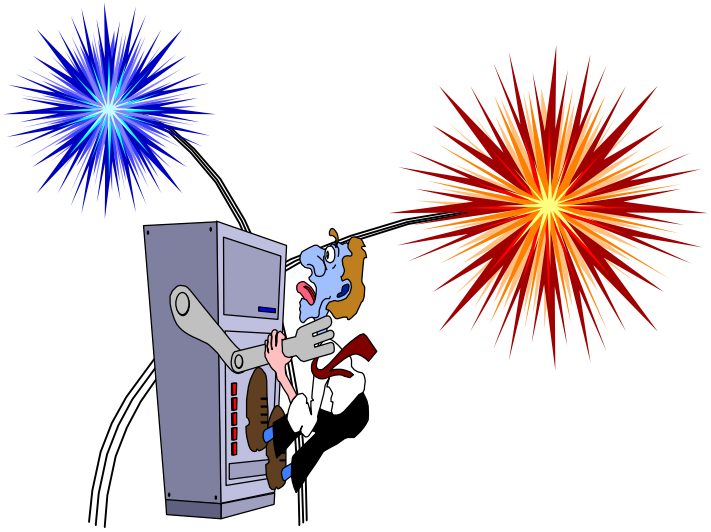
Client/Server–The Reality

- Large, mission critical systems are being built today as pilots
- There is no room for failure
- End-user perception of client/server technologies, and what it takes to implement them, is unrealistic
  - Base all beliefs and knowledge on the latest trade magazine
  - Little concept, or care, of what it takes to play the Enterprise...just deliver

Client/Server–The Reality

- Many more projects will fail than succeed
- Client/server computing is, overall, more expensive than traditional computing paradigms
  - End-users see business benefit far outweighing “soft” costs
- Projects will fail, not due to development tools, but because of lack of infrastructure
- Budgets are extremely tight and infrastructure is a tough sell
  - Budgets tightly controlled by user-community, not IS

The Possible End Result



The Driving Forces

- Business under tremendous pressure to adapt to rapidly changing customer demands/expectations
- Focus and budgets have been shifted away from IS and into business units
- Focus is on rapid development and deployment
- “Keep up with the Joneses” attitude
- IS shops under constant pressure of outsourcing
  - Focus on development and delivery, not architecture

What it Takes to be Successful

- Take an “Enterprise” perspective
  - How is the corporation, not each individual project, going to handle a common set of environmental problems
- Define corporate infrastructures
  - Technical/Communication Architecture
  - Application Architecture
  - Information Architecture

The “Architectures”

Application Architecture
Technical/Communication Architecture
Information Architecture

Separate but dependent upon each other

Technical/Communication Architecture

- Business requirements enabler
- Maps current capabilities to business objectives
  - Identifies shortfalls prior to applications in production discovering them
- Categories of technologies
  - Emerging, Standard, Legacy
- Standardizes technical platforms
  - Desktop, Midrange, Mainframe
- Network capacity analysis and planning

Technical/Communication Architecture

- Establishes Enterprise security mechanism(s)
- Establishes Enterprise disaster and recovery procedures
- Establishes change management and version control procedures
- Establishes help desk procedures and support
- Establishes problem, determination, and resolution strategies

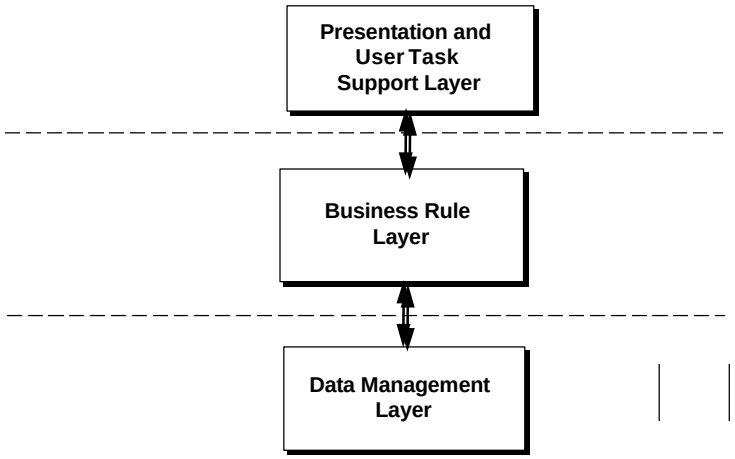
Technical/Communications Architecture Benefits

- Facilitates multi-tier architectures
  - Provides alternative to proprietary infrastructure
    - »SNA
    - »DECNET
- Focuses support requirements
  - By limiting technologies, able to have more staff become “experts”
  - Better use of training budgets

Application Architectures

- Establishes consistent development frameworks
- Establishes and enforces development guidelines based on application type
  - Enterprise
  - Departmental
  - Workgroup
- Establishes application integration strategies and methods
- Establishes testing standards
- Establishes development tool inventory

Client/Server Application Architecture



Client/Server Architecture vs. Physical Implementation

- Perception is that each application architecture component must be implemented on separate machines
- Three-tiered implementations
  - Extremely complex
    - » Difficult to develop
    - » Difficult to maintain
    - » Problem, determination, and resolution next to impossible
  - Not ready for “prime time”

Application Architectures Benefits

- Will empower rapid change
  - Increased expertise in chosen development technologies
  - Significantly lower development time
  - Significantly lower maintenance costs
    - » Increased knowledge among developers as to how applications look and work
  - More focused training budgets

Information Architecture

- Defines how data is universally represented throughout the enterprise
- Defines interaction between systems at an informational level
- Defines data distribution implementation & strategy
- Defines data backup/restoration policies & strategies
- Defines how data is stored throughout the enterprise
  - Often includes specification of corporate database platforms
- Defines access/performance standards

Information Architecture Benefits

- Protects corporation's vital data assets
- Facilitates data sharing between applications
- Facilitates data sharing between platforms
- Presents consistent information interface to end-users and developers
  - Facilitates rapid development

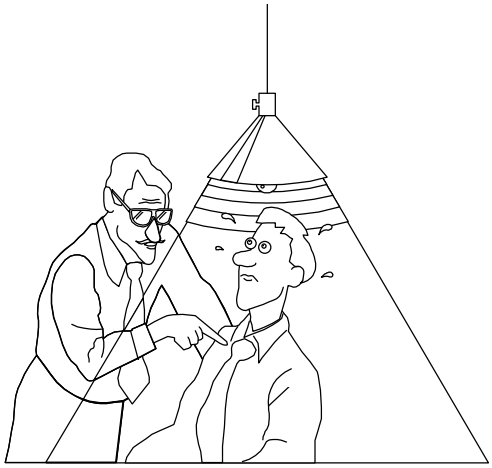
Summary

- Architectures deal with different aspects of the overall distributed computing environment
- Architectures collaborate to form a consistent execution environment
- Architectures ensure consistent success in development and deployment of distributed applications
- Architectures customized per site and reflect corporate computing styles and goals

Summary

- The ‘glass house’ must be extended to the desktop in order for client/server applications to be consistently successful
- Infrastructure and application development technology are mutually dependent; one cannot succeed without the other
- The environment should be broad enough to accommodate ever changing technical and business requirements, yet focused enough to allow for widespread expertise among the development and support areas

Questions and Answers



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