

Client/Server Architecture Team Responsibilities

Session 110

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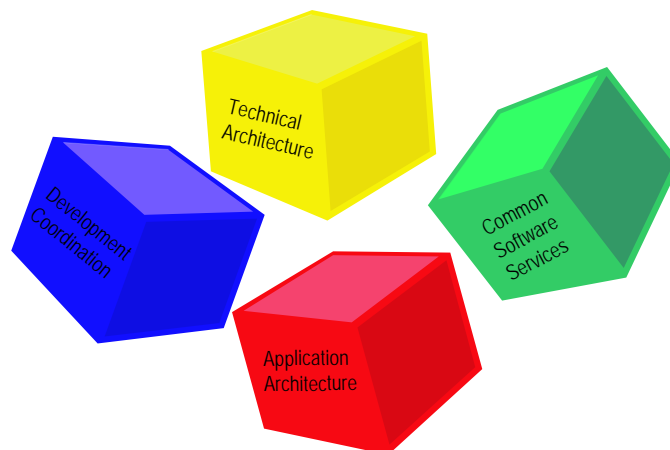
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Agenda



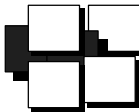
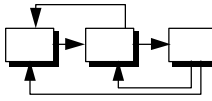
Responsibilities of a Client/Server Architecture Team

- Provide development coordination and technology integration leadership
- Develop Information, Application, and Technical Architecture
- Define and select the right set of tools
- Ensure infrastructure necessary for all development sites, platforms, and lifecycles
 - ❖ Definition and administration of standards
 - ❖ Creation and support of development environment
- Model management and change control
- Common Software Services
- Maximize reusability of system development components

What is ARCHITECTURE?

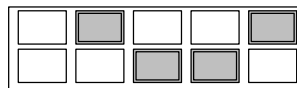
All Companies have a systems architecture, either by design or by default.

Architecture can evolve on a system by system basis

- When components are added onto a core 
- Or, by linking components together after they have been created individually 

OR,

Architecture can be designed at a master level and individual components created as they are needed or funded

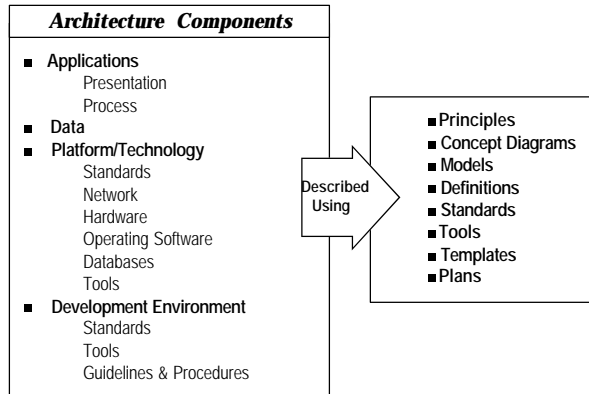


"Developing systems without an overall architecture is like doing a jigsaw puzzle in your lap."

—Ian Miller, Director of Information Architecture, Merck Pharmaceuticals

What is ARCHITECTURE?

Client/Server Architecture is a framework within which each of the major aspects of systems capability is described separately and evolved somewhat independently. Yet together, they create an integrated whole.



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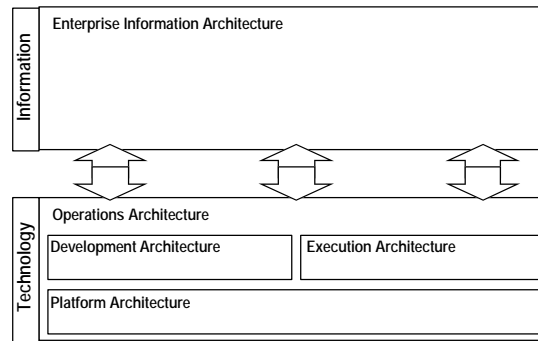
Why Do We Need an Architecture?

- An Application and Technology Architecture is the foundation upon which systems are developed
- A well designed Application & Technology Architecture ensures:
 - ❖ Flexibility
 - ❖ Scalability
 - ❖ Interoperability
 - ❖ Reusability
 - ❖ Reliability and stability
- Without a well defined and cohesive architecture business systems will grow ad hoc to the point at which a crisis will occur requiring a complete reevaluation of all systems.

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A Framework for Application & Technology Architecture

- **An Enterprise Information Architecture** describes the overall structure of an organizations' information and business processes, and how they are supported by the computing environment.
- A **Technology Architecture** describes the computing environment, its component functionality and component interrelationships.

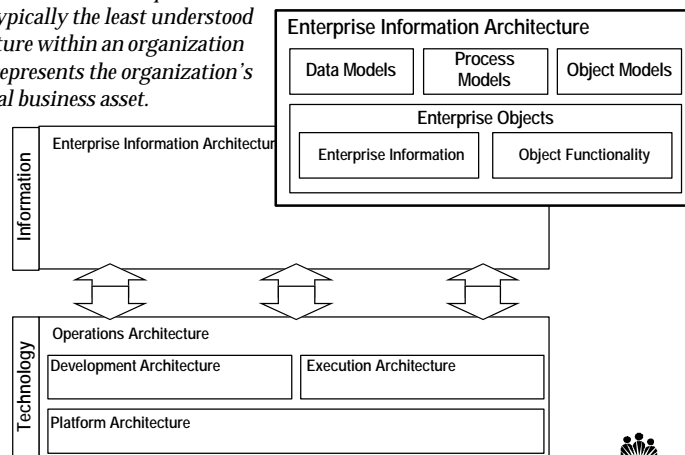


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Enterprise Information Architecture

*The **Enterprise Information Architecture** describes the overall structure of an organization's information and business processes. This is typically the least understood architecture within an organization but yet represents the organization's most vital business asset.*

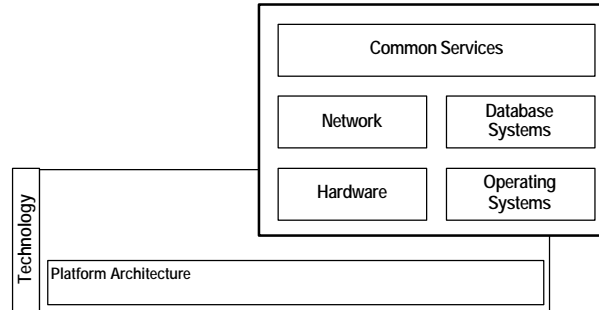


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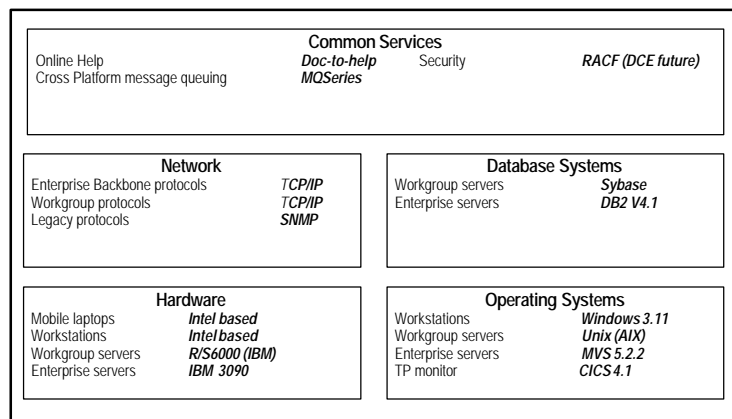


Platform Architecture

The **Platform Architecture** describes the basic hardware, operating systems, networks, database systems and common services upon which an enterprise's information systems are delivered and executed.

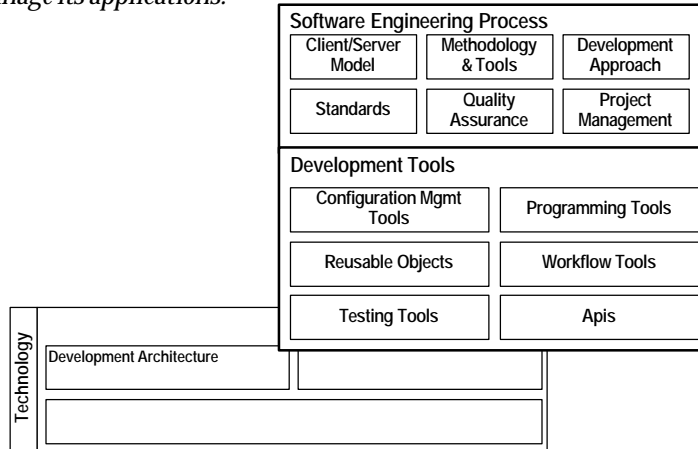


Platform Architecture

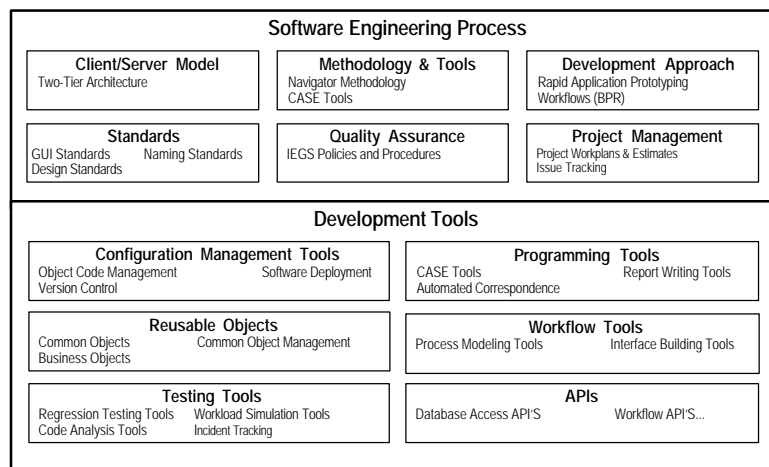


Development Architecture

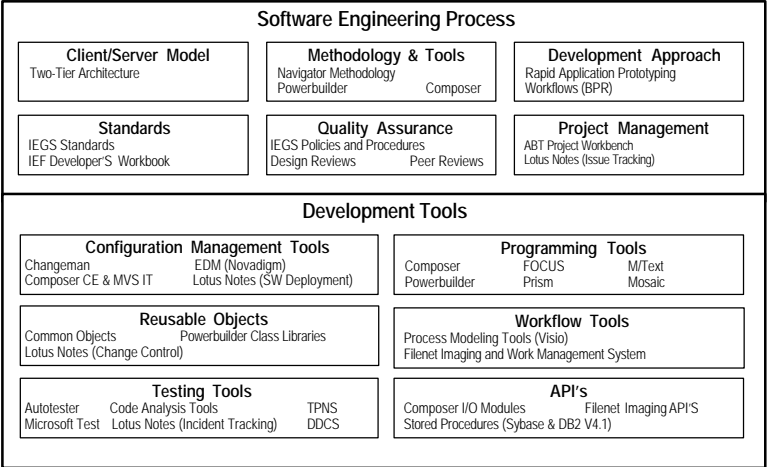
The **Development Architecture** describes the methods, process, techniques and tools that an enterprise utilizes to develop and manage its applications.



Development Architecture

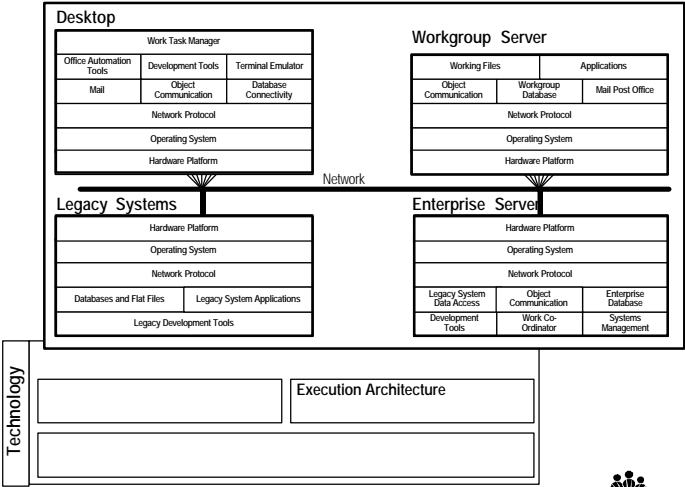


Development Architecture

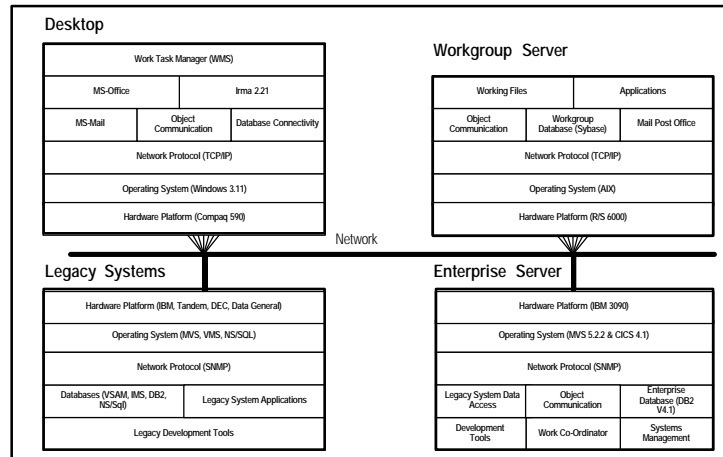


Execution Architecture

The **Execution Architecture** describes the physical characteristics of the implemented end user computing environment.



Execution Architecture

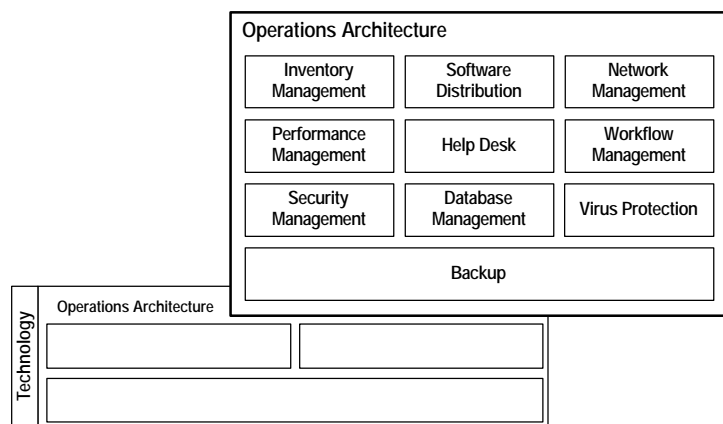


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Operations Architecture

The Operations Architecture describes the methods, process, tools and techniques used to support, protect and manage the technology environment.

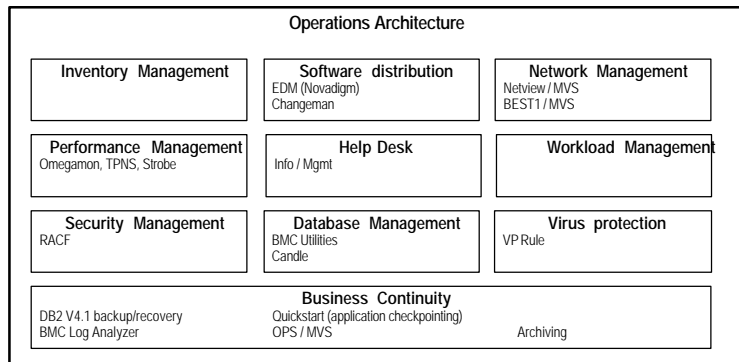


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Operations Architecture

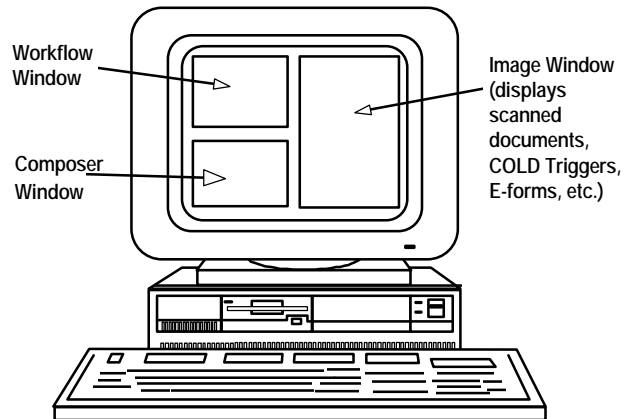
A suite of products that perform systems management in an IBM mainframe environment.



Implementing an Application Architecture

- Development Environment
- Workstation Configuration
- Selecting a User Metaphor
- System Navigation
- GUI Standards and Behavior (IEF Developer's Workbook)
- Application Templates (Client/Server and batch)
- Common Objects
- Common Software Services (Model Management and Change Control)

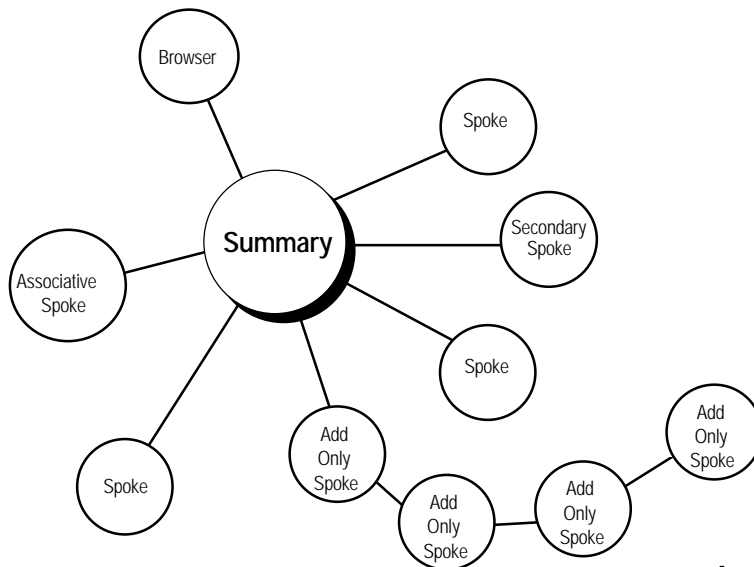
Workstation Configuration



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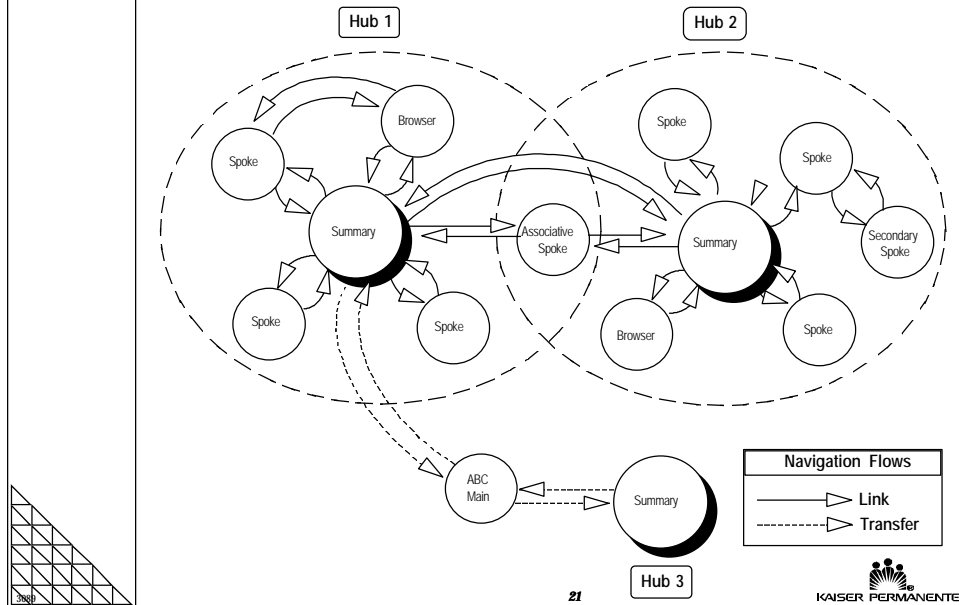
Hub and Spoke User Metaphor



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System Navigation



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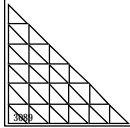
Common Objects

- Application Templates (Client/Server and Batch)
 - ❖ Template for each GUI window type
- Clonable Routines
 - ❖ Code table, address/phone maintenance, text management
- Common Routines (Date Conversions, ID generation, SSN formatting)
- Security Authentication/Authorization (RACF EAB)
- System interface CABs (MQSeries, WMS Triggers)

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Model Management & Change Control

- Development and Test Models
- Change Control Process
- Software Deployment

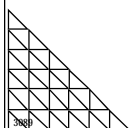


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Development Models

- Architecture
- Corporate Data/Technical Design
- Project Business System Implementation
- Common Objects
- Common Business Action Block
- Object Management

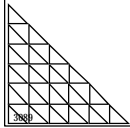


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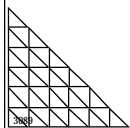
Architecture Model

- Logical view of all data and activities
- Minimal migrations allowed into or out of
 - ❖ Migrations out would cause logical objects to overlay physical objects (lose denormalization or other performance tuning changes)



Corporate Data/TD Model

- Central point for making and distributing data/TD changes
- DEV: model where data model changes are made
- APRV: model containing approved set of changes ready for distribution



Project BSI Model

- Used for developing most procedures, windows, and action blocks
- Phased development of system business processes
- Dedicated development/rework team

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Common Objects Model

Common Objects

- Part of the production application
- Examples: work sets, exit states, design action blocks

Templates

- NOT part of the production application
- Examples: procedures, exit states, cloneable objects (address, phone, comments)

Support Applications

- Generic code table maintenance windows
- Work management and M/Text letter printing batch procedures

DEV: model where common objects are developed

APRV: model containing approved common objects ready for distribution

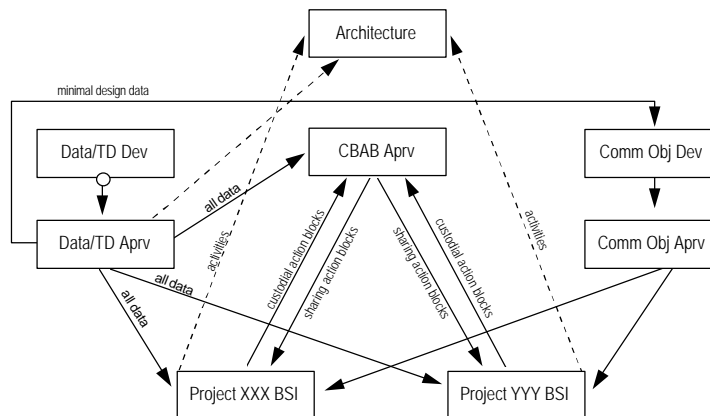
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Common Business Action Blocks Model

- CBAB is an elementary process action diagram or action block that references business entity types
- Central point for distribution of shared action blocks that reference business data
- CBABs are built and maintained in Project BSI models
- APRV: model containing approved set of CBABs ready for distribution

Object Management



Key:
 migrate →
 copy ⇨
 rename ○→
 re-click - ->

Test Model

Will contain the sum of all the Project BSI Models

- Objects will be migrated in only after they have been tested in Development Release Models

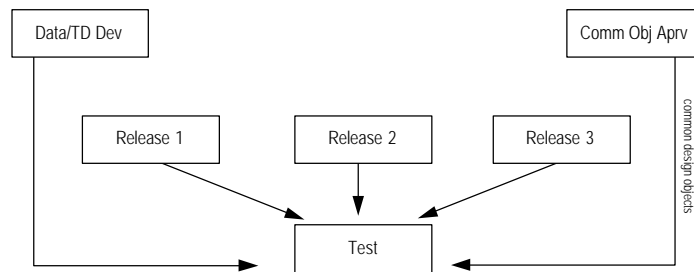
No direct changes allowed

- Developers cannot subset & change
- Model Management can migrate objects in
- Model Administrator: SW Deployment

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Object Management



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re-click - ->

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Change Control Process

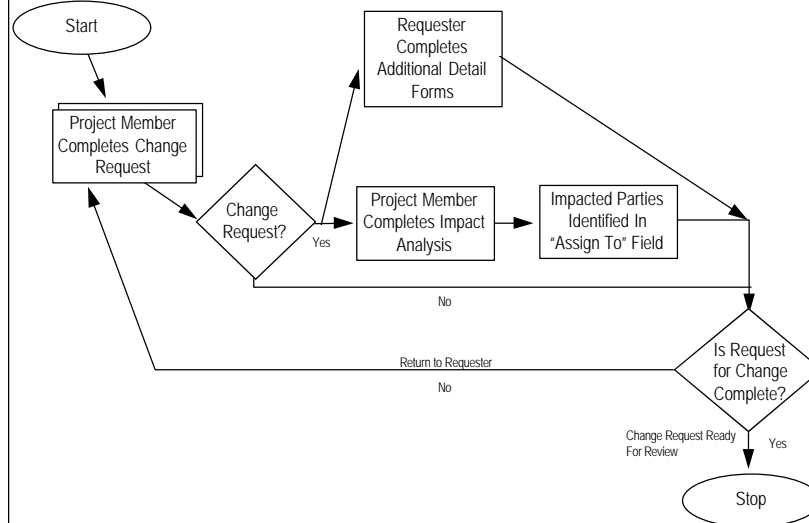
Change control allows orderly modification to shared objects. The general steps followed include:

- Request a change to be made
- Perform impact analysis to identify affected parties
- Have the affected parties review and approve the change request
- Raise the request to project management for a ruling, if consensus cannot be achieved
- Make the approved change and complete the change request

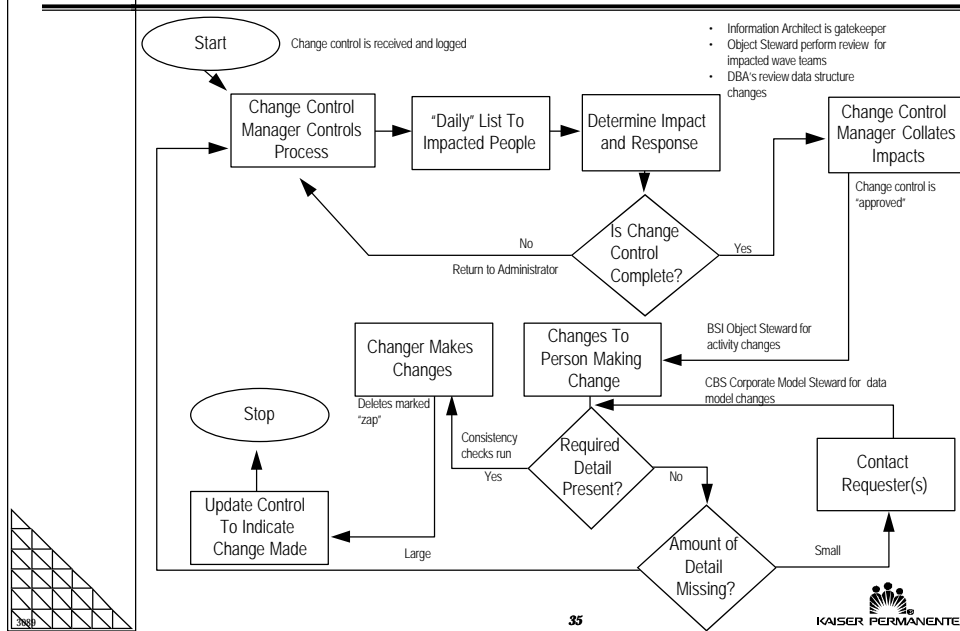
Apply the approved changes to a version of project models

Request for Change Creation Cycle

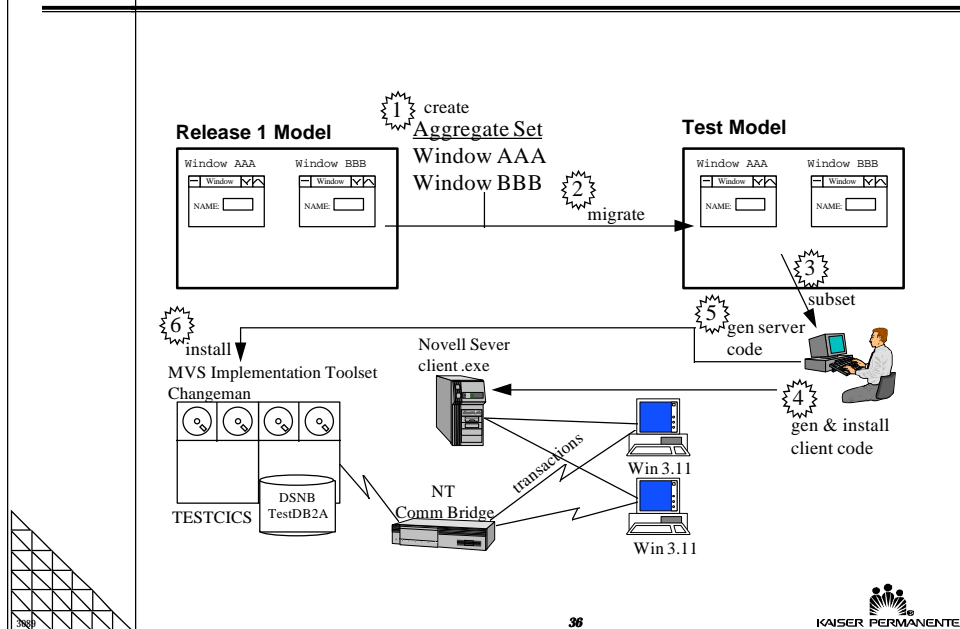
Request for Change Creation Cycle



Process for Change Creation Cycle

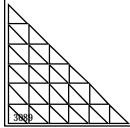


Software Deployment Overview



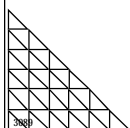
Role of a Pathfinder Project

- Confirmation of Technical Architecture
- Validation and refinement of Application Architecture
- Production of deliverable templates
- Workplan actuals vs. estimates
- Vehicle for client/server benchmarking
 - ❖ Performance testing
 - ❖ Software deployment
 - ❖ Configuration management
 - ❖ Testing methodology and tools



Development Coordination Using Lotus Notes

- Knowledge coordination using workgroup knowledge base
- Discussion databases
- CBS Library
- Deliverables database
- Issue tracking
- Status reporting
- E-mail



Questions & Answers

