

Codifying Architectural Frameworks for Web Services and Federated Systems

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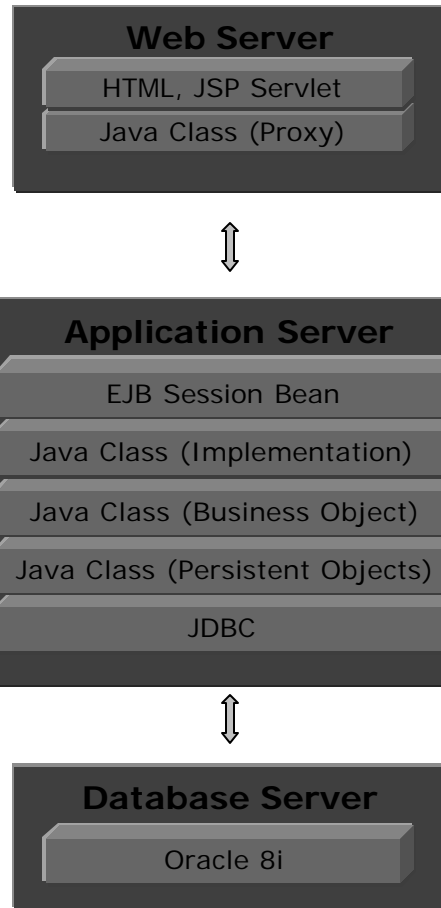
- Introduction to Model Driven Architecture (MDA)
- Impact of MDA on the Enterprise
- MDA Applied to Federated Systems



- OMG's Next Generation of Standards
- Applications Expressed in a Platform Independent Model (PIM)
- MDA Tools Translate PIM to an Implementation
- OMG Task Forces and SIG's Specify Industry Specific PIM's

What is Codification of Architecture

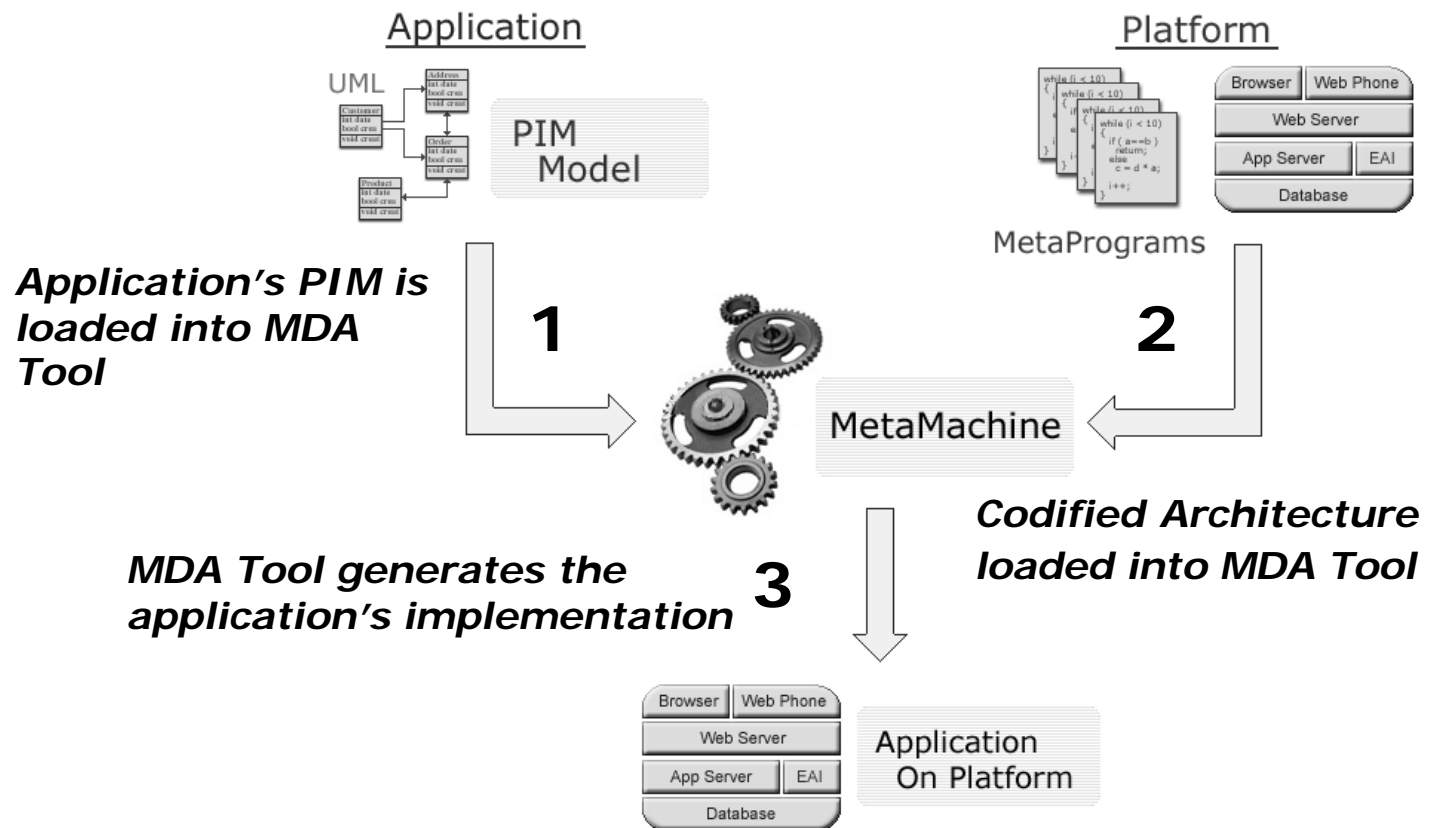
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- Programmable Code Generation
- Model Independent Platform
- Executable Architecture

MDA & Architecture Codification

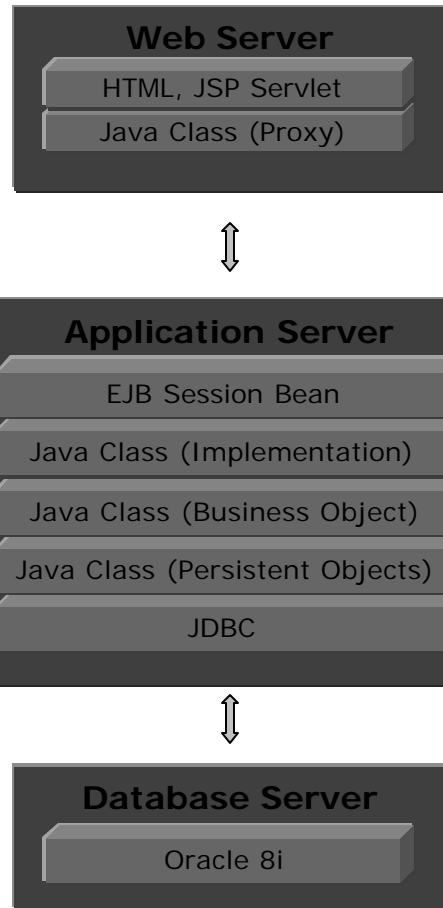
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- Traditional Development Compared to Codification
- Economic Impact
- Improved Standards

Traditional Architecture

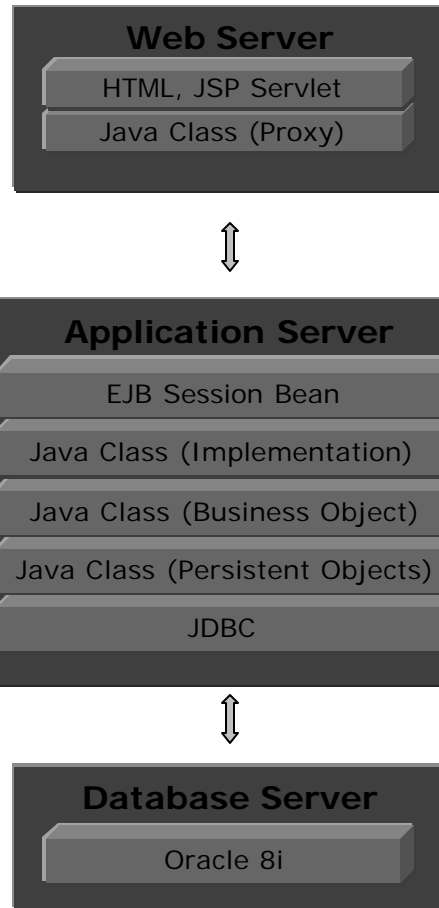
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- **Architecture Specification:**
 - Prose (.doc)
 - Code Fragments
 - UML Snippets
- **Architecture Deployment:**
 - Train Developers
 - Code Review
 - More Training

Traditional Development

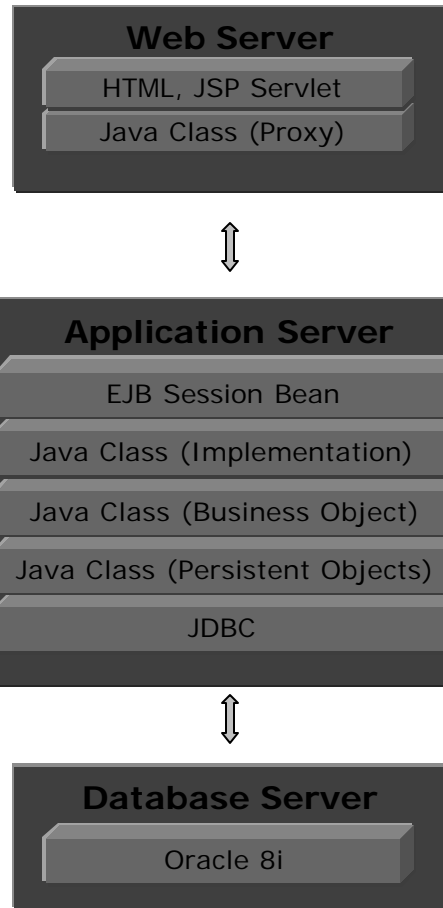
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- **Programmers:**
 - Learn Architecture of Each Layer
 - Implement Each Object in Each Layer According to Architecture
- **Development Cost:**
 - Proportional to Application Size

Codified Architecture

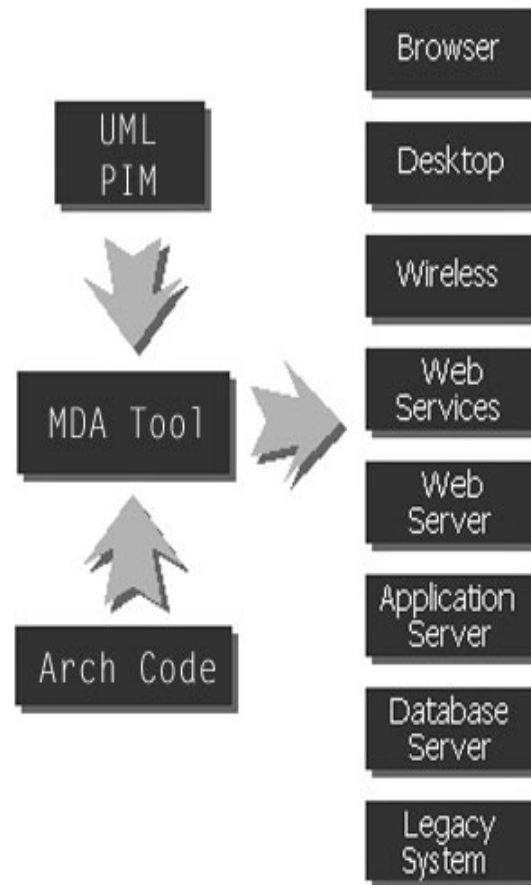
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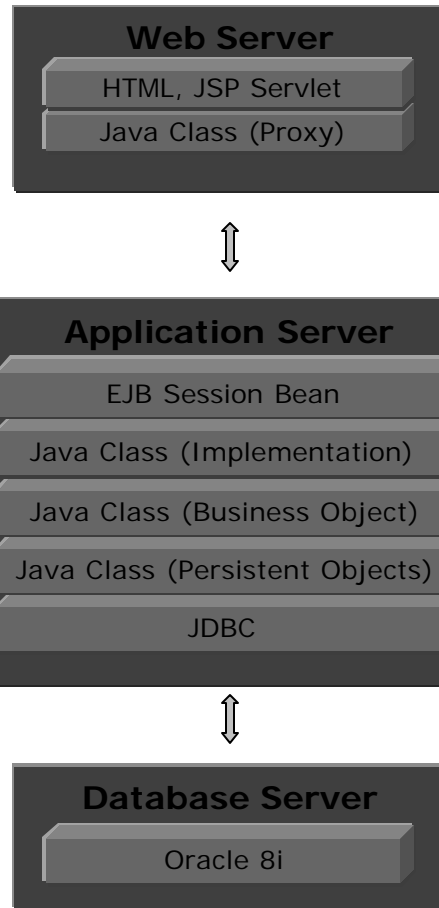
- Architecture Specification:
 - Codify Each Layer
- Architecture Deployment:
 - Distribute Executables

Development with Codified Architecture

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- Load PIM
- Load Codified Architecture
- Generate 90% of Application
- Customize 10% of Application



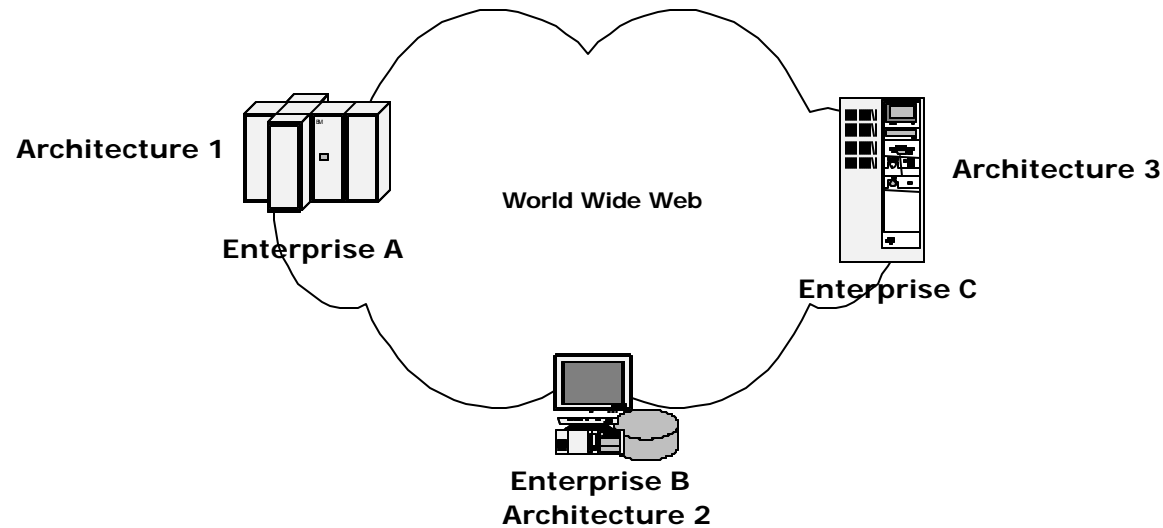
- Architectural Cost is Fixed
- Code Generation Capability over 90%
- Eliminates Training Developers on Architecture

- Generation enforces standards:
 - Architecture
 - Coding
 - User Interface
 - Database Structure
 - EAI
 - Documentation
 - Production Control
 - Modeling

- Definition
- Web Services
- Challenge
- Interface Compliance
- Unique Enterprise Architecture

Definition

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- Loosely Connected Systems from Different Enterprises
- Performing Portions of the Same Application

- Web Services Connect Systems
 - SOAP
 - UDDI
 - WSDL
- Application Expressed in a PIM

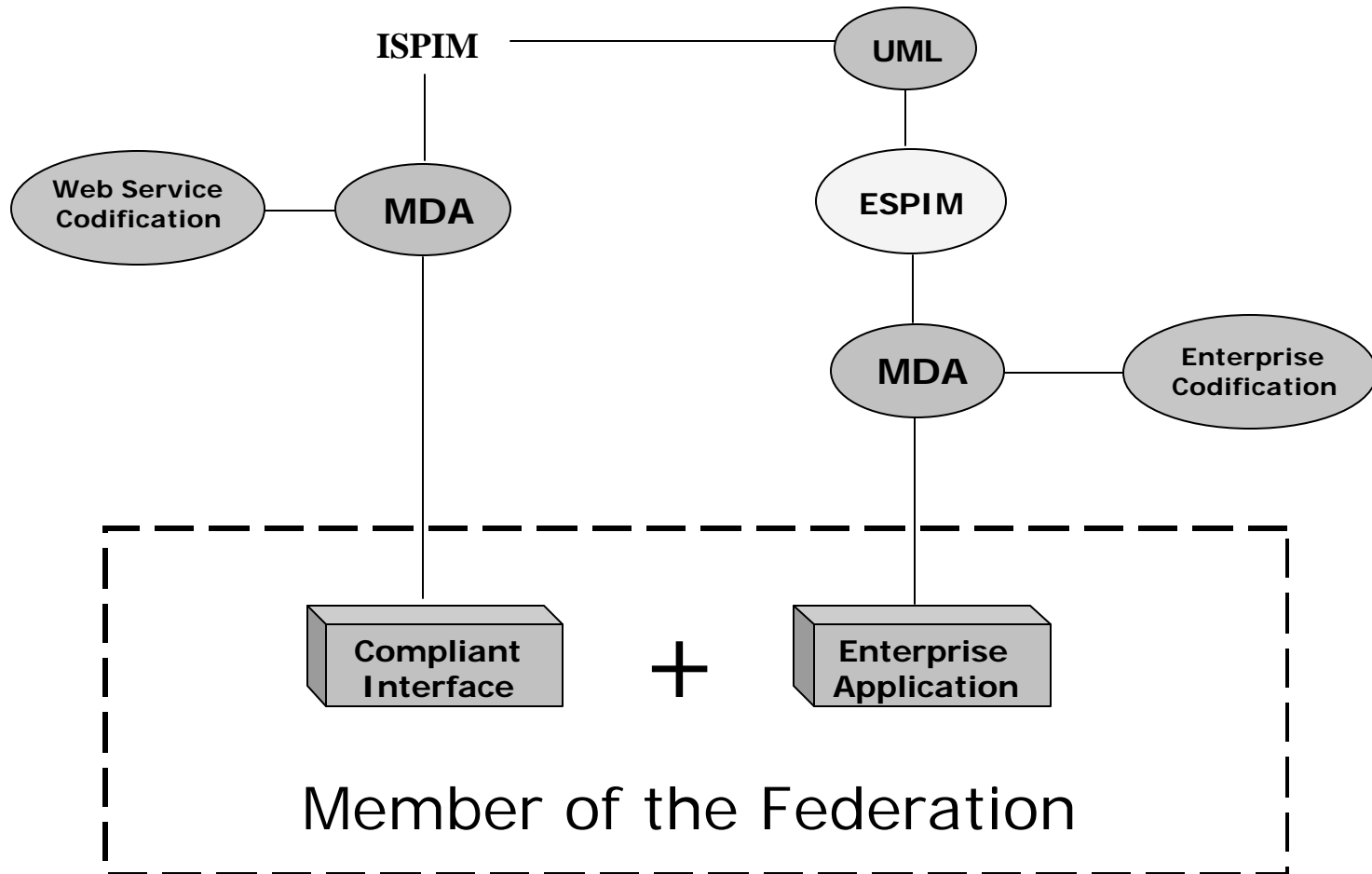
- Interface Compliance
- Application Needs to be Implemented to Each Enterprise's Architecture
- Each Enterprise's Application Needs to Implement Unique Functions

- Industry Specific PIM Defines Interface
- MDA & Codified Architecture Generate Interface
 - J2EE
 - .Net

- Enterprises Enhance the PIM to Create an Enterprise Specific PIM (ESPIM)
- Enterprises Create Codified Architecture Unique to their Environment

Federated System Overview

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- Web Services & Federated Systems Accelerate Enterprise Change
- Advances Cause Architectural Complexity
- MDA & Codification of Architecture
 - Manage Complexity
 - Provide Economic Benefits
 - Increase Adherence to Corporate Standards

Thank You

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