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## **Globalizing a Mobile Application with Oracle Lite (featuring J2EE technology)**

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# Agenda

- Business Challenges
- Solution Overview
- Technical Strategy
- Our Approach
  - » Solutions Framework
  - » Enhanced Capabilities
- Solution Highlights
- The Oracle Advantage



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# Business Challenges

- Globalize and extend benefits program internationally for world's largest automobile manufacturer to 3,000 mobile web-based (offline) & 30,000 online users
- Increase visibility into global warranty program to reduce duplicative warranty claims and part returns across all operating companies
- Consolidate and modernize over 120 disparate systems into one system
- The solution must be:
  - » Available in two modes of operation: online & offline
  - » Scalable and flexible to adapt to regional markets
  - » Continuous and rapid product improvement as the benefit program evolves
  - » Supportable in 26 languages with minimal developmental impact

# Voice of the Customer



“In the warranty space, we have embarked upon an ambitious path. Creating a common warranty claim payment system along with the supporting field agent and service agent analytical tools helps support rapid, continuous product improvement and greatly improves our ability to support global products.”

-Joyce M. Nolan, Director of Warranty Operations

# Solution Overview

- A global mobile application built using core capabilities of Oracle Lite and J2EE technologies
- Single code line solution for both online and mobile web-based (offline) users employing:
  - *Struts framework*
  - *Delegate pattern EJB & Singleton approaches*
- Customized WebToGo Workspace
- Laptop based footprint
- Increased value of data for business intelligence

# Technical Strategy

- Maximize single source code solution for both online and mobile web-based (offline) users
- Create full scale enterprise application, using a thin client approach, with laptop operations in a disconnected mode
- Interoperable across Java, J2EE, and Windows-based environments



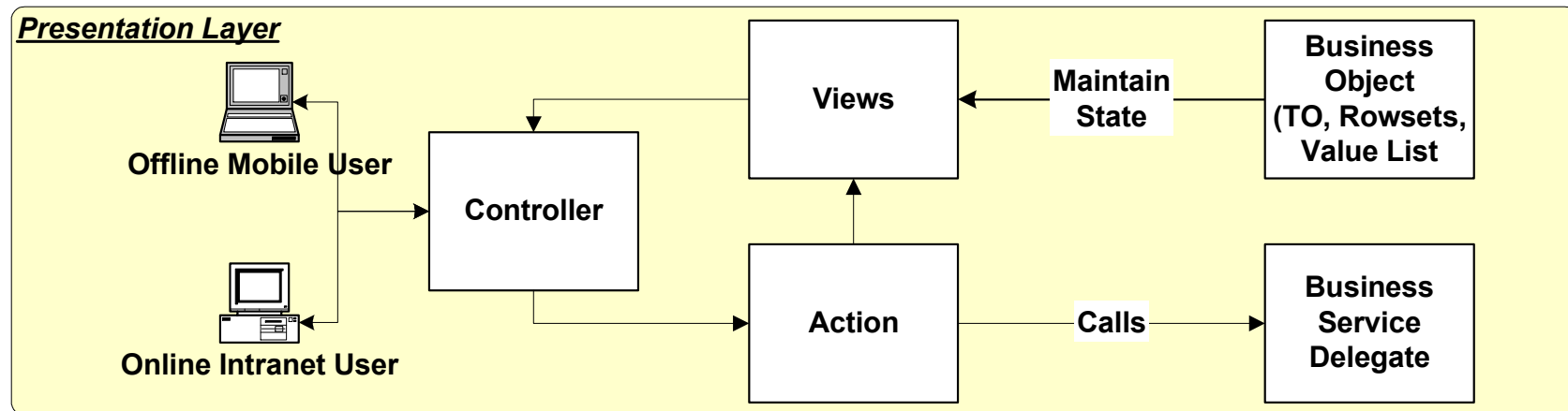
# Our Approach - Framework

- Application flexibility by abstracting business and data access layers
  - » online vs. offline
- Compliant with client technology framework for application development
- Development to deployment in 7 months



# Framework – Presentation Layer

Same code base for both online web and offline mobile users

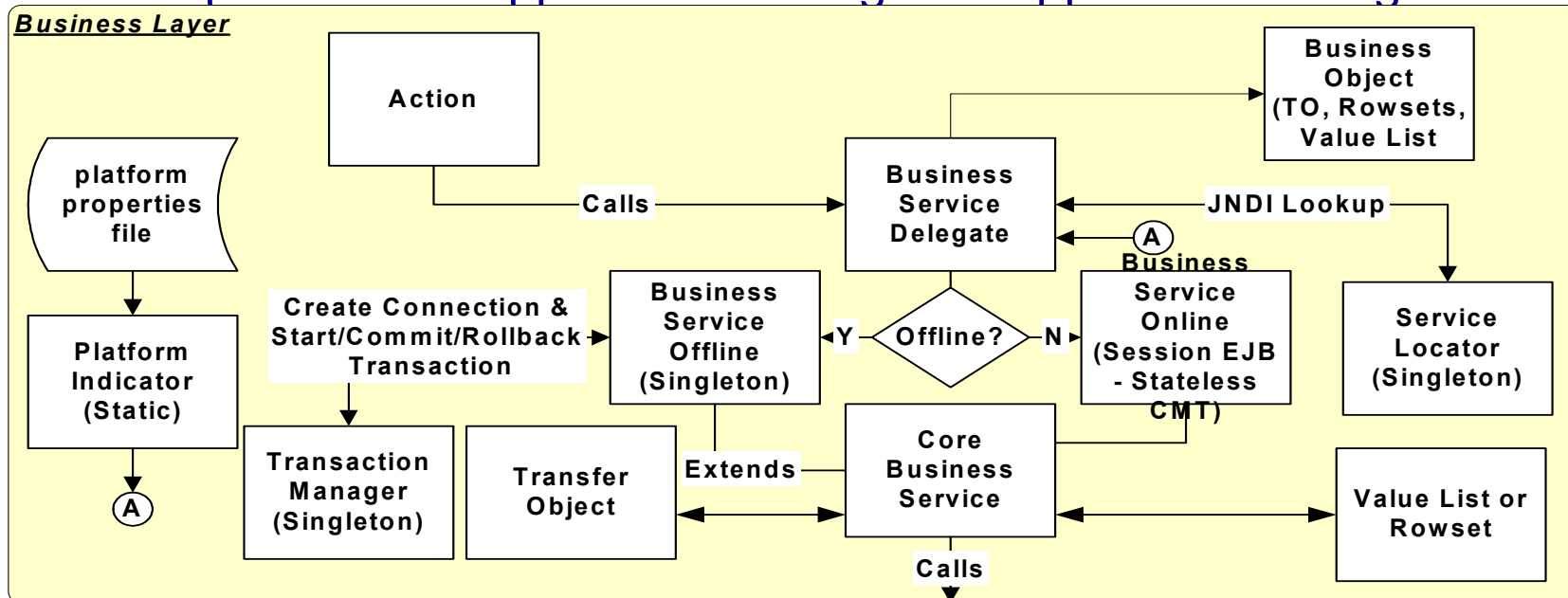


## Presentation Layer:

- Provides user interface (UI) services and static content such as html pages, style sheets, images and JavaScript
- Generates dynamic content using JSP's and Taglibs for rendering
- Struts framework controls internationalization & application processes

# Framework – Business Logic Layer

Template based approach allows global application changes

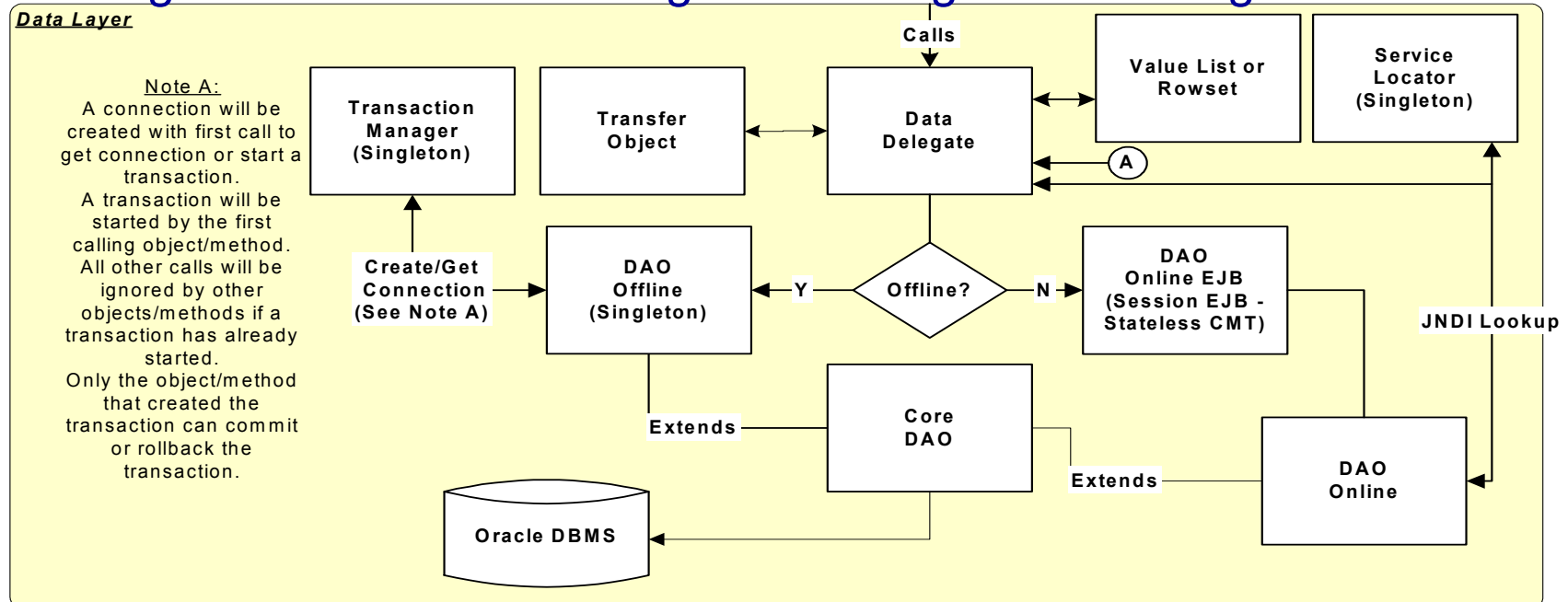


## Business Layer:

- Provides well-defined, discrete business processes and functions, as well as utility functions
- Business logic code to be abstracted from the online vs. offline client
- Offers online EJB's / offline Singleton Transaction Objects

# Framework – Data Layer

## Intelligent connection handling for invoking & committing transactions



### Data Layer:

- Common data access using data access objects (DAO)
- Platform abstraction for the core data services layer
- Online EJB's / offline Singleton & JDBC for transactions

# Enhanced Capabilities

Oracle Capabilities	OAOT Enhanced Features	Customer Benefit
<ul style="list-style-type: none"> <li>• Common security model</li> <li>• Workspace to manage user logon and applications</li> </ul>	<ul style="list-style-type: none"> <li>• Password encryption</li> <li>• Account locking</li> <li>• Password history, aging</li> <li>• Single installation for multiple languages</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced security model</li> <li>• Only required to support 1 installation</li> </ul>
<ul style="list-style-type: none"> <li>• Database and application replication</li> </ul>	<ul style="list-style-type: none"> <li>• Created thin client application with the ability to run full solution on a laptop</li> <li>• Customized JDBC to emulate JMS Queue</li> </ul>	<ul style="list-style-type: none"> <li>• Significantly lower TCO as well as cost of future upgrades</li> <li>• Emulate online J2EE capabilities</li> </ul>
<ul style="list-style-type: none"> <li>• Server and Client logging</li> </ul>	<ul style="list-style-type: none"> <li>• Log4J for Customized Workspace and Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased time in break/fix</li> </ul>

## Solution Highlights

- Reduced TCO of solution by developing a single solution that can function in multiple modes
- Shared 90% of the same code base, reducing development and O&M costs
- Application is always on with 100% uptime
- Solution replication provides data, data model and application changes to be deployed via synchronization
- Oracle Lite API platform created on open architecture for enterprise integration

# The Oracle Advantage

- Oracle RAC and Oracle Application Server Farm utilizing full failover capabilities
- Data synchronization capabilities significantly reduced upgrade costs by allowing data, data model and application changes via the technology platform
- Custom built Java programs utilizing out of the box Oracle Lite API's to deploy publication items led to rapid development
- Application deployed through Oracle Mobile Manager and Packaging Wizard



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# Greg Rekounas – Oracle Solutions Architect

## OAO Technology Solution, Inc.

- Leading Oracle Lite Solutions Architect and nominee for Oracle ACE Director
- Establishing an Oracle Lite thought leadership role & recognized by Oracle as a global authority
- Innovating Oracle Lite deployments has resulted in White Papers to document incredible results
- Shaping the way Oracle Lite operates today as a result of pushing the product's limitations
- Providing companies with a fresh approach to an "off the shelf" offering from Oracle
- Influencing how Oracle Lite can integrate with other applications, platforms & operating systems

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