

Converting Oracle Forms & PL/SQL to Java



**The New York
Oracle User Group**

Presenter:

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President & CEO**



Agenda

- The Business Reasons for Converting to Java
- Oracle's Strategic Direction
- Migration Approaches & Obstacles
- About CipherSoft
- Questions & Answers

The Business Reasons For Converting to Java



Why Convert to J2EE?

- A powerful Object Oriented Programming language
- The "most open" product that is available at this time, conforming both to its own standardized (and published) specifications as well as with other industry standards such as CORBA
- JDBC (Java Database Connectivity) provides a standardized interface for Relational databases for Java, providing a greater level of database independence and portability
- Eliminates any costs/support to Oracle Forms and PL/SQL licensing
- Platform independent

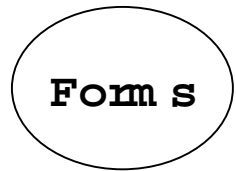
Why is Java superior?

- Java is currently the only technology that provides a fully interactive, GUI interface for the Web
- The Java architecture was designed with security in mind, and not as an afterthought. This provides a simplified and consistent means of protecting your assets
- Java provides features that make programming easier as well as more powerful
 - multi-threading capabilities
 - automatic "garbage collection" (for efficient use of memory)
 - standardized error trapping and detection
 - distributed processing capabilities

2-Tier Architecture

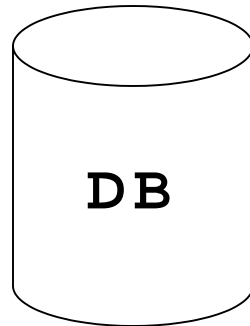
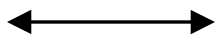
3-Tier Architecture

**Canvases, Alerts,
Visual Attributes,
Windows**



**Blocks, Items,
LOVs, Relations**

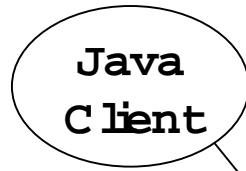
Logic



Data

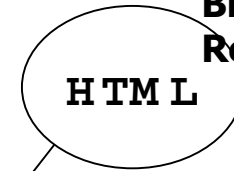
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**Canvases,
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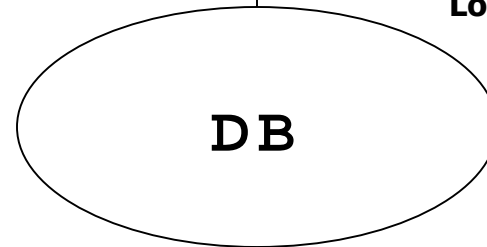
Logic

**Page per
Block and
Relation**



Logic

**Blocks, Items,
LOVs,
Relations**



Logic

Oracle's Strategic Direction

- Recognition of J2EE
- Oracle Tools Direction

Forms Improvements

- Performance and scalability on the Web
 - application pre-starting will be reduced
 - Pooling server-side Java virtual machines to reduce the memory footprint of applications
- Integration
 - Extensible client and middle-tier Java integration (Java Importer and Pluggable Java Component interface)

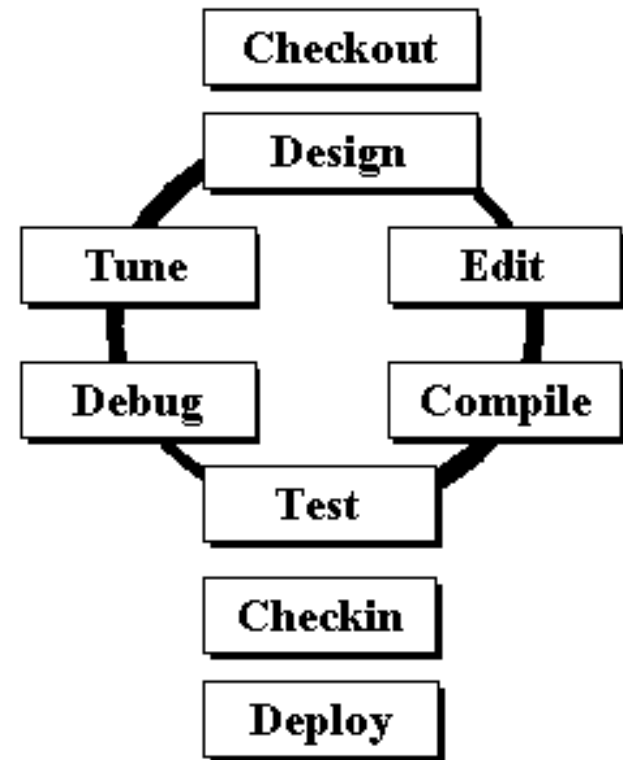
**Summarized points from ODTUG article written by
Duncan Mills, Senior Principal Product Manager for
Oracle Application Development Tools**

Recognition of J2EE

- Oracle cites research from IDC to make the case that the enterprise market is headed in the J2EE direction
 - *"The mainstream acceptance of J2EE application servers has increased the need for open and interoperable Java development tools," IDC research director Rikki Kirzner said. "Being able to deploy to any J2EE-certified application server -- as well as being able to use a fully flexible development environment that can be easily customized and extended with third party tools or in-house utilities -- helps developers get their products to market in a rapid and cost effective manner."*
- Oracle's goal with its new developer product was to offer an open-standards development environment that Java developers could use on any operating system
 - *"Not only does Oracle9i JDeveloper allow developers to build 100 percent standards-based applications, but the tool itself is completely open and extensible," says Oracle's William Dwight.*

Tools - Oracle9i JDeveloper

- Oracle9i JDeveloper is a complete and integrated Java and XML development environment for quickly and easily *Developing, Debugging, and Deploying* J2EE e-business applications and Web services



Full development life cycle

"Over a quarter of a million developers have already downloaded Oracle9i JDeveloper in the last year"

-- OTN Website --

Tools - Oracle 9iAS

Provides built-in security & system capabilities including:

- Fully compatible with Java standard
 - J2EE 1.3, EJB 2.0, Java Servlet 2.3, JSP 1.2 and JDBC 2.0 extensions
- Lowers application server integration costs
- Allows enterprises to use a single platform to address application-to-application, business-to-business, and Web services integration
- Oracle claims that this integration will make the popular app server the only one on the market to feature built-in integration technology
- Allow enterprises to leverage the middle tier as the single hub of integration

Tools - Business Components for Java

- Simplifies building, reusing, deploying, and customizing business logic for enterprise and Internet applications
- Common Tasks
 - Queries
 - DML
 - Locking
 - Caching
 - Transaction control
 - Business logic
 - User interface
 - UI Logic
- Oracle JDeveloper provides integrated design-time support for the Business Components framework
- The wizards, editors, and other integrated design tools in JDeveloper make it easy to model, develop, test, deploy, and debug BC4J applications

Tools - UIX

- Allows content to be structured into hierarchies and categories
- Compliancy with UI standards is built-in (in the component level)
- Open, flexible framework for development
- Supports a wide range of client agents
- Platform independent
- Maintains a consistent appearance
- UIX applications may be customized at multiple levels
- UIX architecture has been designed with localization and internationalization support
- High performance

Migration Approaches & Obstacles



Migration Approaches

- Rewrite Application
- Web-enable Forms
- Manual conversion
- Automatic conversion

Rewrite Application

- The cardinal, fundamental law of programming:
“It's harder to read code than to write it”
 - Old code has been *used*. It has been *tested*. *Lots* of bugs have been found, and they've been *fixed*
 - When you throw away code and start from scratch, you are throwing away all that knowledge - all those collected bug fixes - Years of programming work
- You are wasting an outlandish amount of time and money writing code that already exists

Web-enable Forms

- Easy
- No change to development style
- Not a “real” migration
- Lower costs

Manual

- Time consuming
 - Design own architecture from scratch
- Human error issues
- Lack of resources or skill set
- Disruptions to business operations
- Escalating costs

Automatic

- Might entail some lost functionality – at mercy of tool provider
- Trusted architecture
- Cost efficient
- Less time intensive
- Manages risks
- Easier

Obstacles

- Logic in Forms both Presentation and Business Logic
- PL/SQL to Java Conversion (overloads, private functions)
- Triggers vs. Events
- Navigation
- Built-Ins
- Target Frameworks

Who is CipherSoft?

- A Canadian privately owned software and services company with over 25 years of conversion expertise
- Providing the most rapid and cost effective conversion path to J2EE multi-tier applications



OracleWorld 2002

CipherSoft Offerings

Services

- Migration services
 - **90% faster** than manual conversion & provides an **80% cost reduction** for the client
- Technical support
- Consulting
- Java training
- Quality assurance services

Product

- **Exodus** converts existing Oracle Forms & PL/SQL applications to open and standards based technologies such as Java, XML & HTML
- **Exodus** interfaces with JDeveloper and Oracle's UIX and BC4J technology
- **PRODUCT IS AVAILABLE** for purchase or conversion services

Oracle Migration Partner

- CipherSoft shares Oracle's vision for an integrated, complete and standard development environment
- CipherSoft and Oracle believe strongly, and have invested heavily, in the combination of Java, SQL, and XML
 - Java is used for programming the business & presentation logic
 - SQL for interacting with the database and;
 - XML for passing information between loosely coupled applications



Q U E S T I O N S
A N S W E R S

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