



Rich Client Programming with Model 204 and NetbeansTM

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Topics



- ◆ **What Is Your Organization Doing Today?**
- ◆ **Model 204 Software Components**
- ◆ **Netbeans™/Java™**
- ◆ **The Demo**
- ◆ **Under The Covers**
- ◆ **A Look At The Application**
- ◆ **Conclusion**
- ◆ **Questions**
- ◆ **References**



**What Is Your Organization
Doing Today?**

What Is Your Organization Doing Today ?



- ◆ **Web Applications**
 - **Web Enabling Model 204 User Language applications**
 - **Creating new Web enabled applications**
- ◆ **Business to Business Applications**
 - **Creating new ways to do business**
 - **Creating new XML, SOAP, Messages, etc.**
- ◆ **Desktop Applications**
 - **Bring new life to Model 204 using Desktop Client Applications**



Model 204 Software Components

Model 204 Software Components



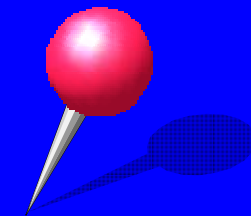
- ◆ **SQL/User Language**
 - RSQL Module linked
- ◆ **Freeway/204**
 - Horizon Definitions
- ◆ **JDBC for Model 204**
 - J204.jar file
- ◆ **Java™**
 - Java Virtual Machine
- ◆ **Netbeans™ 5.5 or 6.0**



SQL/User Language

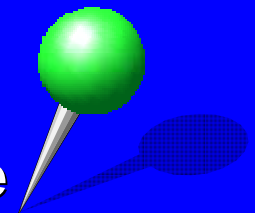


- ◆ All of the Connect[★] Suite of Products will execute SQL or User Language (RCL) syntax
- ◆ Model 204/SQL has a lot of the Ansi 92 syntax available
- ◆ Model 204/RCL is User Language
- ◆ User Language procedures can be run through the any of the connectivity products



◆ Freeway/204

- Horizon is now included in the installation process of Model 204 V5R1 and greater
- Supplies two SQL and two RCL (User Language) threads at no cost to you
- Requirements to use Freeway/204
 - For SQL access an SQL Catalog is needed
 - SQL Catalog is not needed to use RCL (User Language) threads. However, the RSQL module will need to be linked with your online
 - Define iodev threads, processes and process groups with the appropriate security



◆ JDBC for Model 204

- Part of the Connect[★] Suite of Products
- Written in native Java language – JDBC Type 4 driver
- JDBC 2.0 compliant
- JDBC for Model 204 supports JRE 1.4 or greater
 - JRE = Java Runtime Environment
- Supports both User Language and SQL syntax
 - jdbc:J204://CCAMVS1:3090/SQL/USER0/USER0.
 - jdbc:J204://CCAMVS1:3090/RCL/USER0/USER0
- Completely thread safe
 - Class by design

◆ Did I mention Java[™] is Free?





◆ JDBC for Model 204

■ Language independence - Write once

- Servlets
- JSP (Java Server Pages)
- Classes
- GUI applications
- JDBC API
 - ◆ API which is result set based (Row and Column)

■ Platform independence – Run many

- Unix, Linux, z/OS, z/VM, MS Windows, PalmOS or any other operating system which supports the Java 2 runtime environment



Netbeans™ and Java™

- ◆ **Created by Sun Microsystems**
 - **Runs on many platforms**
 - **Unix, Linux, Apple, MS Windows or any other operating system which supports the Java 2 runtime environment**
 - **IDE (Integrated Development Environment Platform)**
 - **Platform for developing your own modules**
 - **Web Page Development**
 - **Business to Business Development**
 - **Client Desktop Development**
 - **and much more...**
 - **Netbeans™ is Open Source and Free!**

Netbeans™ continued...

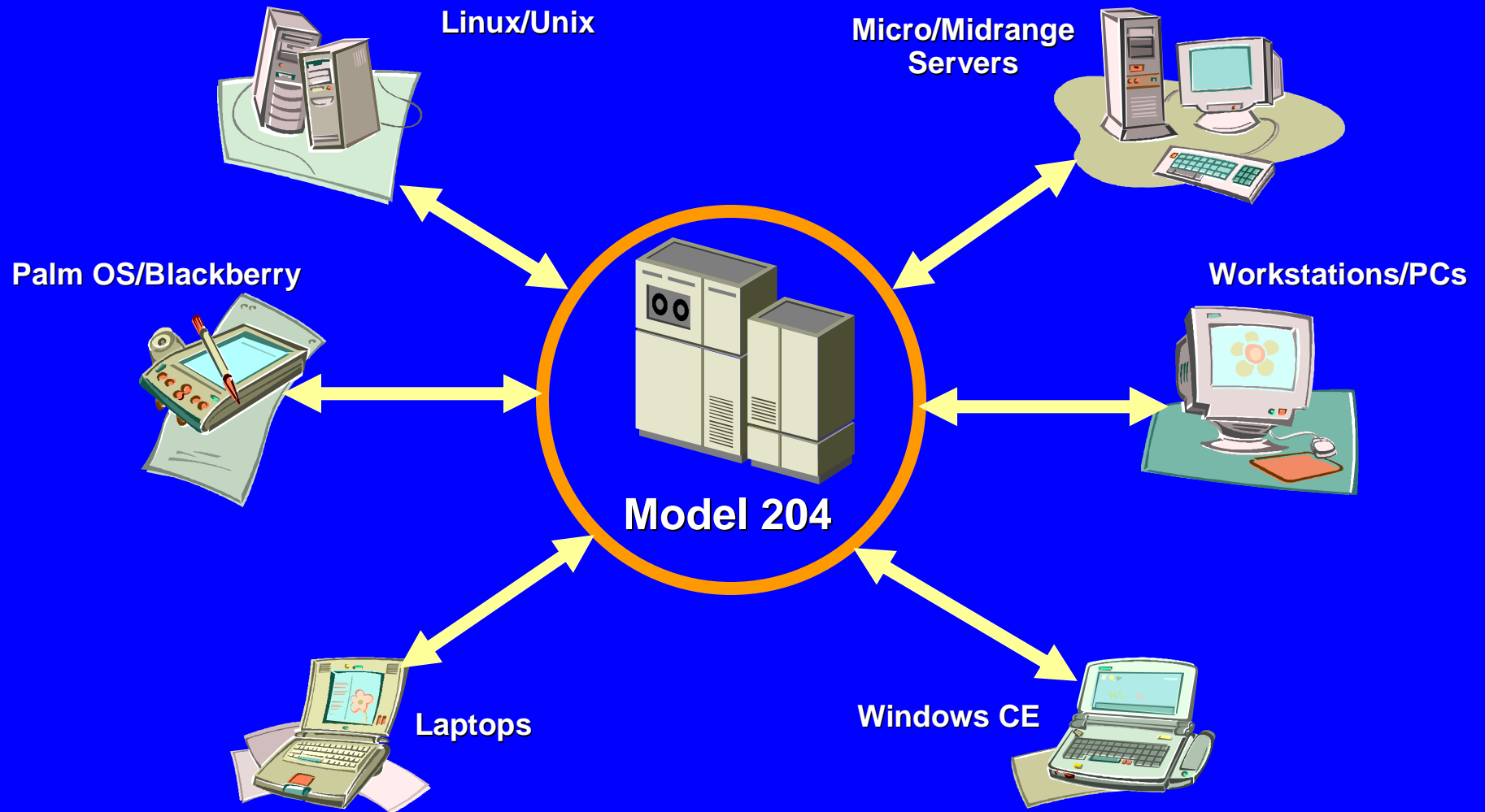


The screenshot shows the NetBeans IDE interface for a project named "DesktopApplication2". The main window is in "Design" mode, displaying a Swing form. The form has a title bar with "File" and "Help" menus. Below the title bar is a table with four columns: "Pid", "Last Name", "First Name", and "Total Premium". Below the table are four input fields: "Agent", "Address", and two empty text boxes. A dropdown menu is located at the bottom of the form. The "Inspector" window on the left shows the "Form DesktopApplication2Frame" with "Other Components" and "[JFrame]". The "Palette" window on the right shows a list of Swing components: "Panel", "Tabbed Pane", "Split Pane", "Scroll Pane", "Tool Bar", and "Desktop Pane". The "Properties" window on the right shows "<No Properties>". The "Output" window at the bottom shows the following text:

```
deps-jar:
compile:
run:
!TopLink Info!: 2007.05.14 09:31:02.028--ServerSession(27994366)--TopLink version: Oracle TopLink Essentials - 9.1 (Build
```

- ◆ **Created by Sun Microsystems**
 - **Runs on many platforms**
 - Unix, Linux, z/OS, z/VM, MS Windows, PalmOS, Blackberry or any other operating system which supports the Java 2 runtime environment
 - **Java™ Components**
 - Virtual Machine (like a kernel)
 - Compiler (creates bytecode)
 - **Java™ is now Open Source!**

Java™ continued...





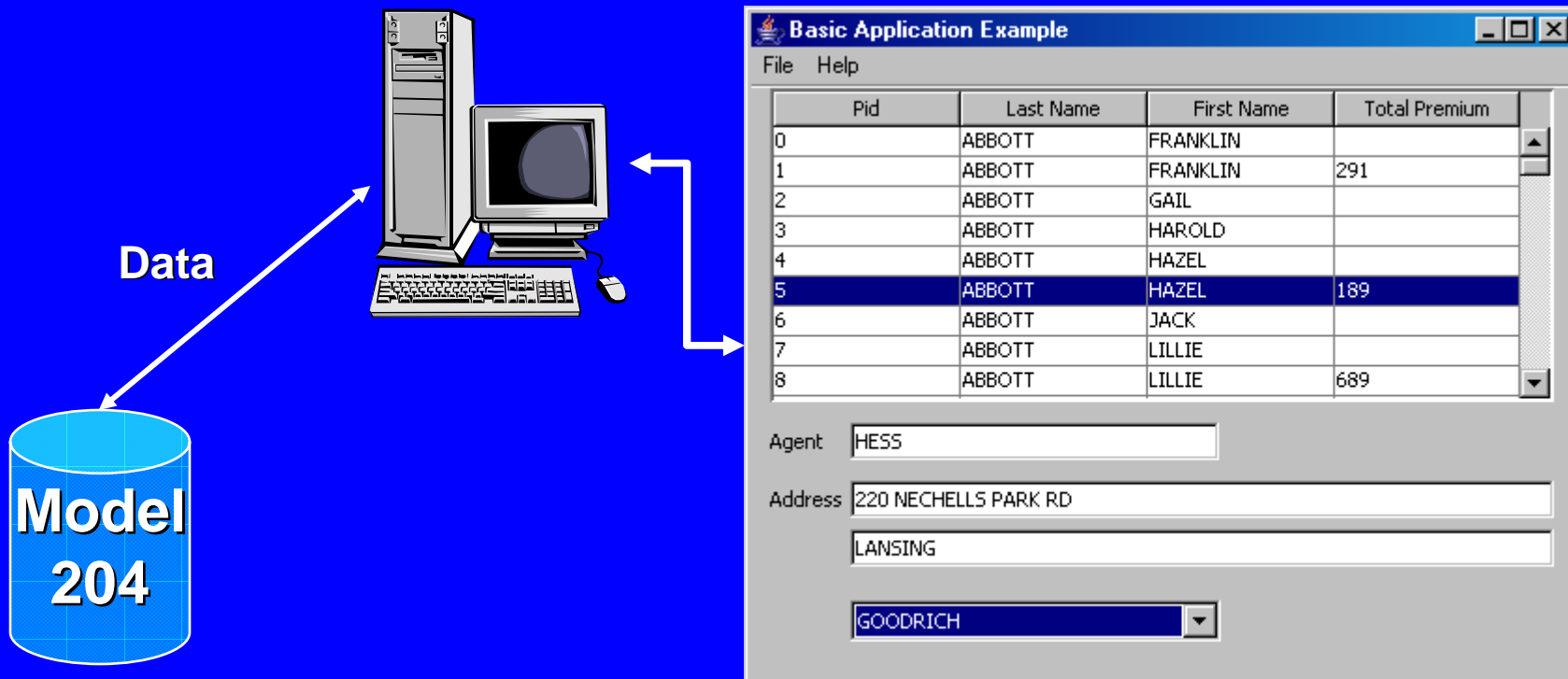
The Demo



The Demo



- ◆ Moving data from Model 204 to a newly constructed desktop client using Model 204, JDBC and Netbeans™





Under The Covers

Under The Covers



- ◆ **Netbeans™ and JDBC for Model 204**
 - **Code Creation is Pure Java™ with EJB 3.0 and Java™ Persistence (JSR 227)**
 - **Java™ Persistence uses the JDBC for Model 204 driver to connect to Model 204**
 - **Netbeans™ reviews the catalog information once connected and creates a list of available tables**
 - **JDBC for Model 204 is compatible with Netbeans™ 5.5 and 6.0**



A Look At The Application



Conclusion

Conclusion



- ◆ **What Is Your Organization Doing Today?**
 - **Let us help you understand what you can do with Model 204 and JDBC**
- ◆ **Model 204**
 - **Very reliable and fast database engine to serve client applications for both SQL and User Language**
- ◆ **Netbeans™ for fast application development**
- ◆ **Java™ for reusability across multiple platforms**
 - **Language independence (Write once, run many)**
 - **Platform independence**
 - **JDBC for Model 204**
 - **Java™ is Free!**

Conclusion continued...



- ◆ **The Demo**
 - Shows what can be done “Out of the Box” with JDBC for Model 204 and Netbeans™
- ◆ **Under The Covers**
 - A glance at the demo and what took place
- ◆ **A Look At The Application**
 - A review of the application from a code generation stand point

Questions



References



- **Model 204**
 - <http://www.cca-int.com/prodinfo/m204.html>
- **SQL and Freeway 204**
 - <http://www.cca-int.com/prodinfo/horizon.html>
- **Connect[★] Suite of Products**
 - <http://www.cca-int.com/prodinfo/jdbc.html>
- **Java**
 - <http://java.sun.com>
- **Java 2 development kit**
 - <http://java.sun.com/j2se>
- **NetbeansTM (Integrated Development Environments)**
 - NetBeansTM 5.5 / 6.0 (<http://www.netbeans.org>)
- **W3C - World Wide Web Consortium**
 - <http://www.w3c.org>

References continued...



■ Good Books

- **Building Java™ Enterprise Systems with J2EE**
 - ◆ Author: Perrone and Chaganti
 - ◆ Publisher: SAMS
- **J2EE Developers Handbook**
 - ◆ Author: Perrone, Chaganti and Schwenk
 - ◆ Publisher: SAMS
- **JDBC API Tutorial and Reference, Third Edition**
 - ◆ Author: White, Fisher, Cattell, Hamilton, Hapner
 - ◆ Publisher: Addison Wesley
- **Rich Client Programming – Plugging Into The Netbeans™ Platform**
 - ◆ Author: Bourdeau, Tulach and Wielenga
 - ◆ Publisher: Prentice Hall