



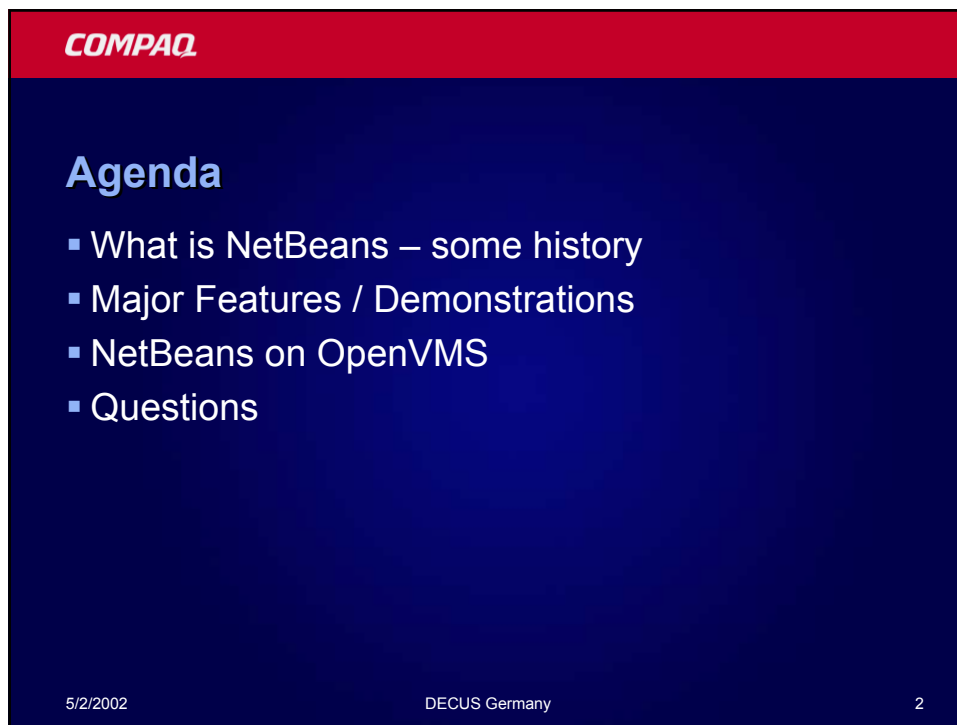
COMPAQ
Inspiration Technology

NetBeans

THE Application Development Environment
for OpenVMS

Sunil Kumaran, Thomas Siebold

This slide features a red header with the Compaq logo and tagline. The main content is on a dark blue background, with the title 'NetBeans' in large white font. Below it, the subtitle 'THE Application Development Environment for OpenVMS' is in a smaller white font. The presenters' names, 'Sunil Kumaran, Thomas Siebold', are at the bottom in white. A red footer bar is at the very bottom.



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Agenda

- What is NetBeans – some history
- Major Features / Demonstrations
- NetBeans on OpenVMS
- Questions

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What is NetBeans?

- Sun-sponsored/owned Java development environment written in pure Java
- Free
- Open source, www.netbeans.org
- Large developer community
- Positioned as a tools platform
- Runs on OpenVMS, Solaris, OS/2, Windows, TRU64 UNIX, Linux, HP-UX, MAC OS-X
- Forte for Java is a re-packaging of NetBeans

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NetBeans – The Vision

- Focus on NetBeans as a tools platform, but continue producing and improving the IDE
- Stability and backward-compatibility are required
- Open source, “release early, release often”, every four months
- Add support for new languages and technologies
- Public sources under a very free license will allow both individuals and companies to benefit from cooperating

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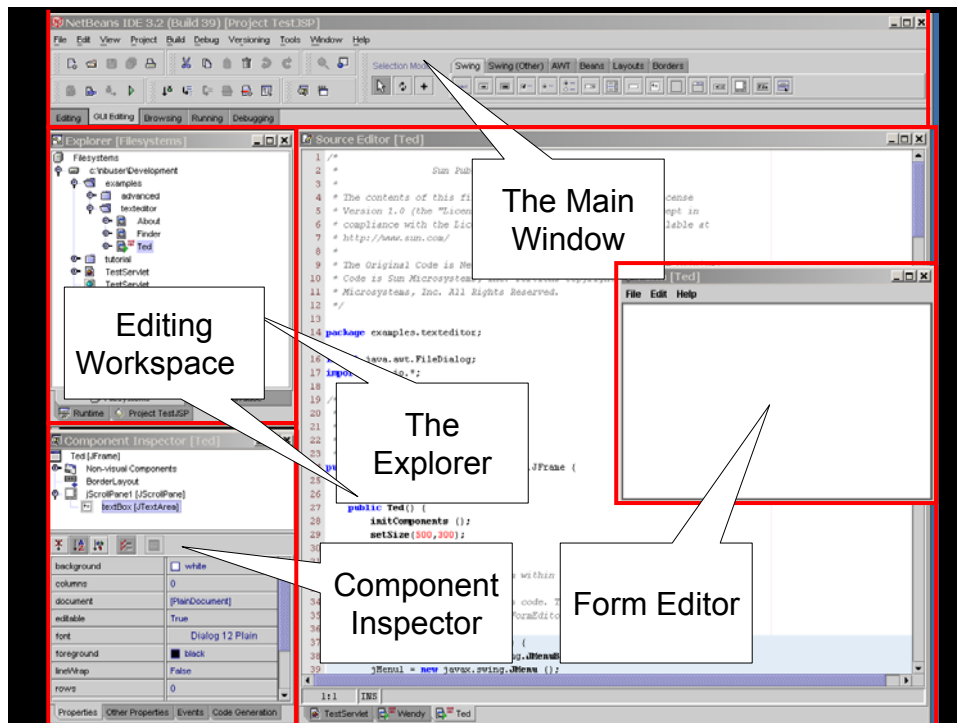
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A Tour of the IDE

- At startup
 - Optional check for new versions on the Web
 - The IDE opens in the editing workspace
 - The main window opens
 - The Explorer and Properties windows open
- The Main Window
 - at the top of the screen
 - command center for the IDE
 - contains the menu bar, several toolbars, the component palette, and the workspace buttons (Editing, GUI Editing, Browsing, Running, and Debugging).
 - provides access to all the top-level windows in the IDE, Source Editor, the Properties window, the debugger Window, the Options window, Project Settings window.
 - help menu
 - menus and toolbars
 - System
 - Edit
 - Data
 - Build
 - Debug
 - Form
 - component palette
 - workspaces

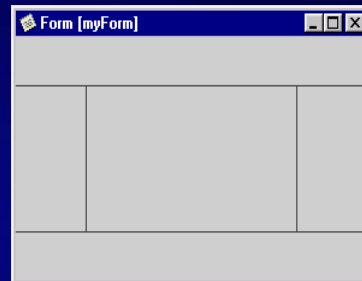
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The Form Editor

- Visual drag and drop
- Supports SWING and AWT
- Support several layouts
- Component Inspector allows modification of properties



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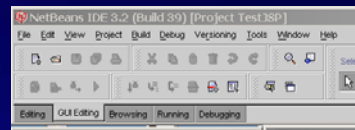
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Workspaces

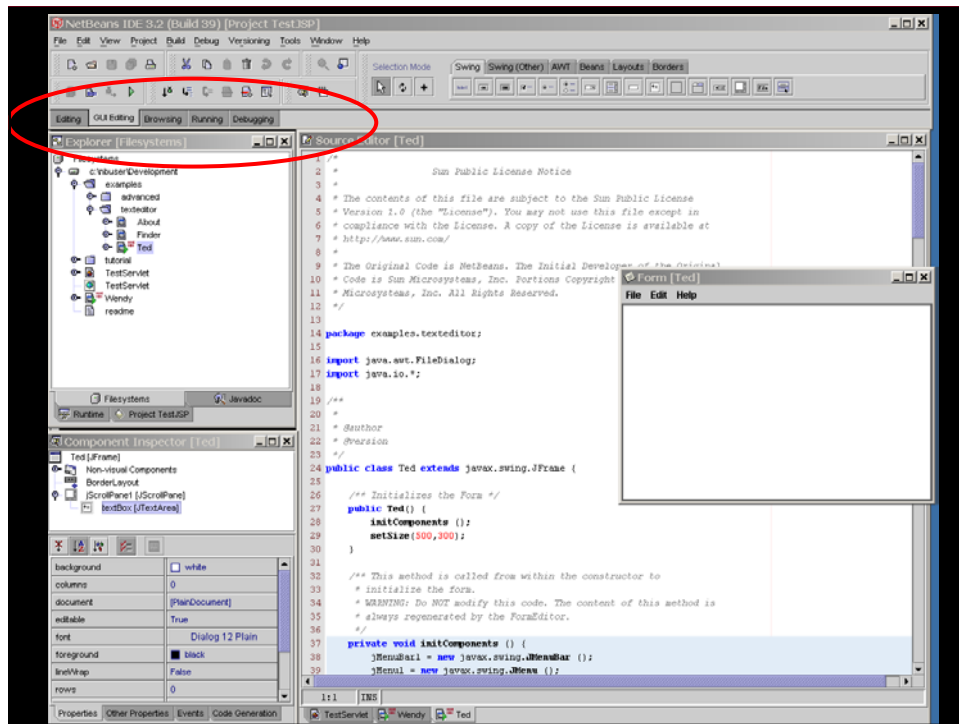
- Editing
 - Explorer, Properties, and Source Editor windows
- GUI Editing
 - Explorer, Form Editor, Component Inspector, and the Source Editor windows
 - Used to design/develop GUIs
- Browsing
 - Object Browser and the Properties window
- Running
 - Execution View window and the Output window
- Debugging
 - Debugger window and the Output window



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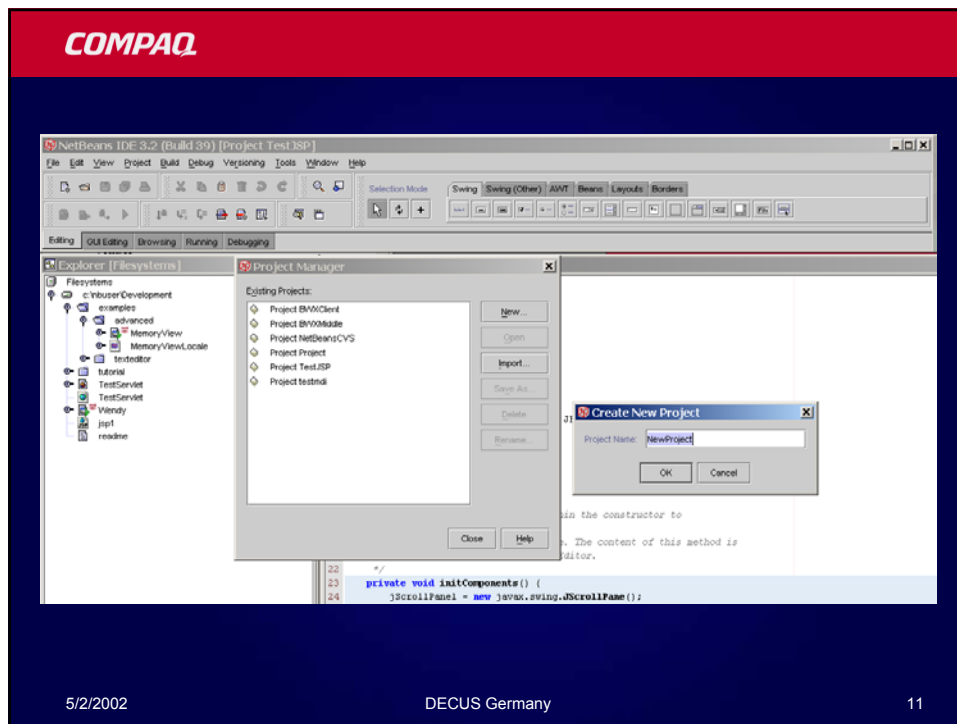
Projects in the IDE

- Features
 - Compile all files in the current project with one command
 - Run or debug the whole project
 - Create unique configurations for each project
 - Use the Project tab in the Explorer to view and work with only files that have been added to the current project
- All work is done in a project, which reflects
 - windows positions,
 - project settings (such as configurations for compiler and debugger types), and
 - files you have added to the Project tab are reflected in the current project.
- You can also import projects that were created in another Java IDE (Visual J++, JBuilder, Visual Café).

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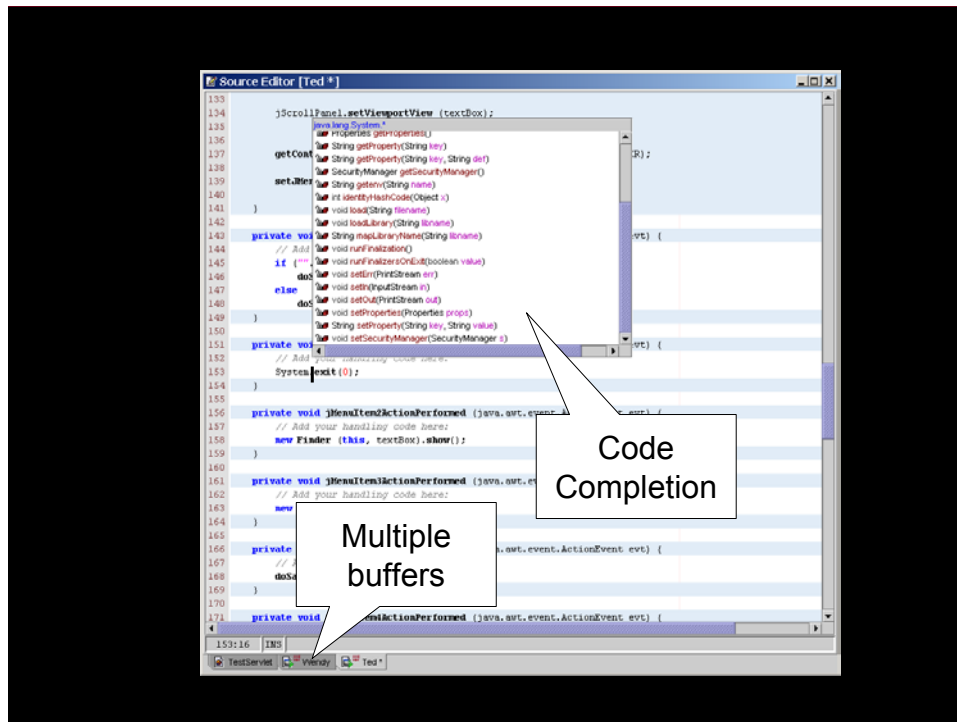
Integrated Source Code Editor

- Features
 - Code completion
 - Syntax coloring
 - Abbreviations
 - Code formatting
 - Selection tracking in the Properties window
 - Shortcuts for formatting, etc
 - Jump list
 - Bookmarks
- The editor is a completely replaceable module within the IDE.
- EDT-keypad editor may be available later this year

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Built-in Source Code Control Support

- Supports Concurrent Versioning System (CVS)
- Supports any generic version control system (VCS) that has a command-line interface
- Features include:
 - The Revision Explorer - tree view of file versions
 - The Diff window – for side-by-side comparisons

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CVS Support

- Two options for working with CVS:
 - CVS Built-In Client module
 - CVS Command-Line Client Support module
 - The CVS command-line executable and documentation is available at <http://www.cvshome.org/>

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Generic Version Control Support

- Use one of the built-in or downloadable configurations for specific VCSs.
- Create your own configuration for your VCS.
- Adapt an existing configuration to suit your needs.
- Command-line client is required.
- Compaq is working on a CMS addin-module.

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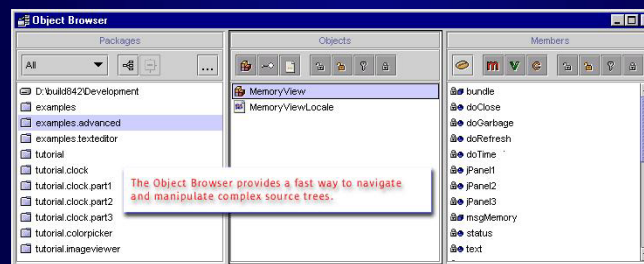
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Object Browser and Explorer

- Provides navigation through complex sources trees
- Supports source examinations
- Has panes for packages, classes, members



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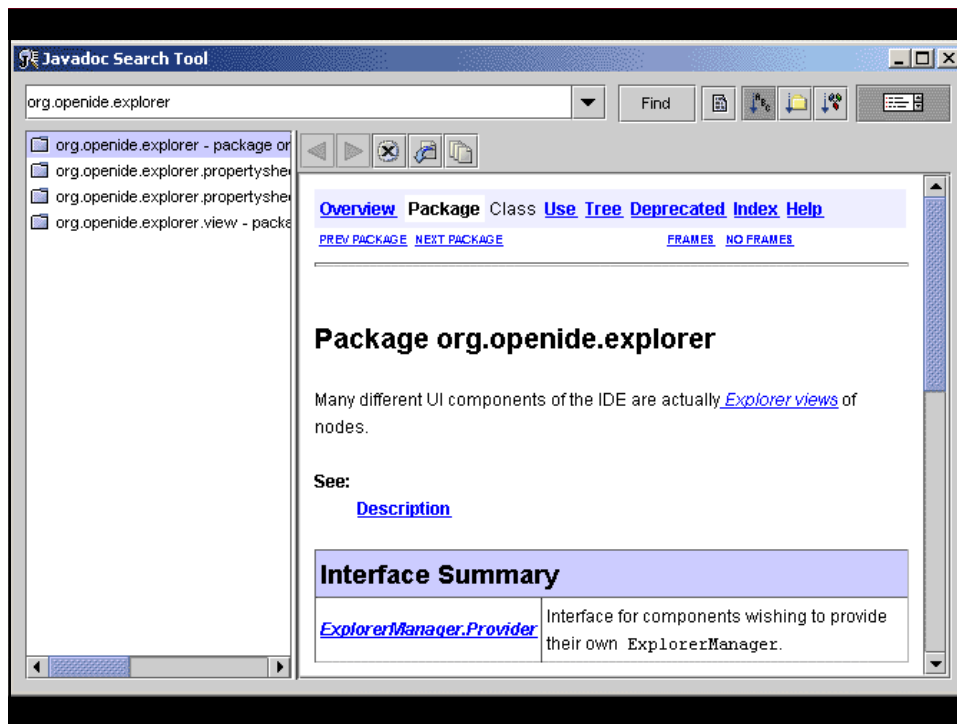
JavaDoc Support

- Supports viewing and generation of JavaDoc standard.
- Viewing
 - Use Javadoc tab in the explorer window
 - You can mount existing docs, JDK docs for example

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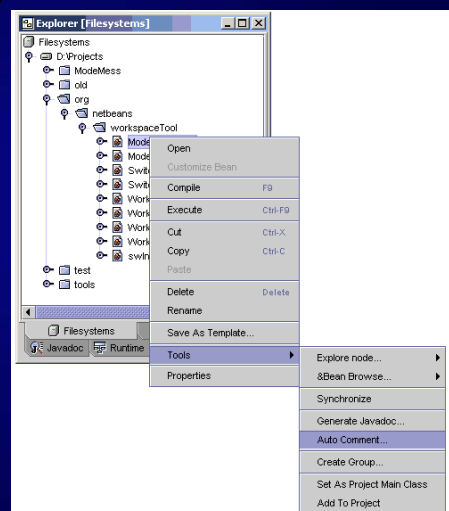
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Generating JavaDoc

- Uses specially formatted comments
- Right-click to choose Tools, etc..



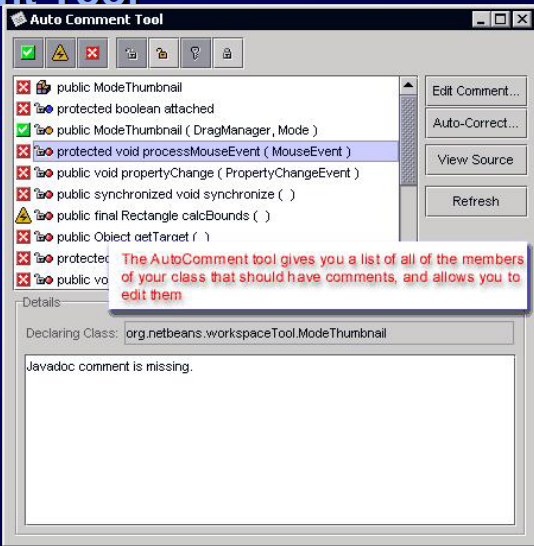
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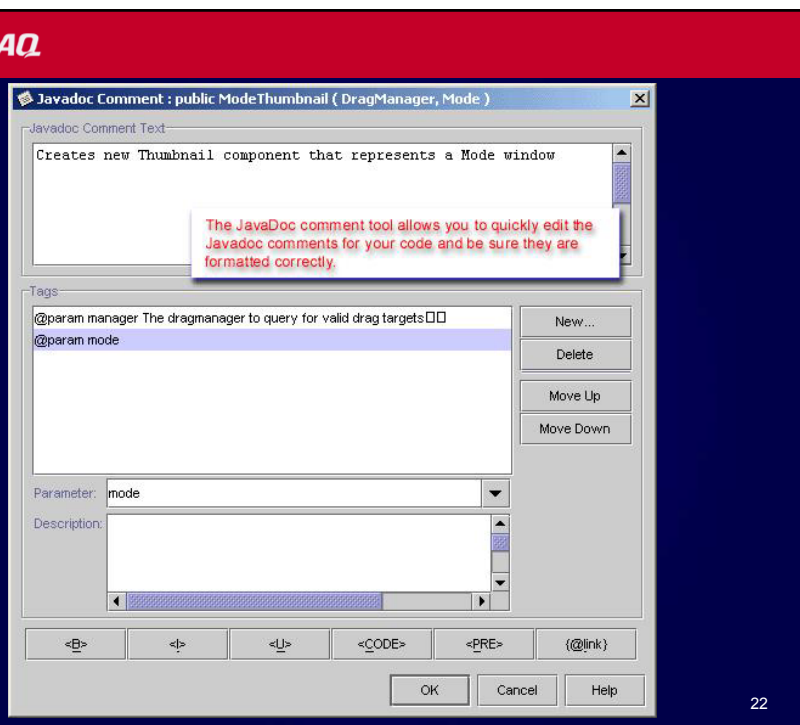
The Auto Comment Tool

- Helps automate the task of commenting interfaces



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Working with Java Beans

- IDE supports generation of standard bean parts
 - Bean properties
 - Events
 - Listener registration methods
 - BeanInfo
- Visual beans as containers
- Define icon for the bean
- Add to component palette

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JSP and Servlet Support

- Uses internal Web server/browser (ICE)
- Supports
 - Editing (same as editing Java sources)
 - Execution
- Provides 2 JSP templates text/html and text/plain

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RMI Support

- RMI Module
 - RMI Wizard
 - RMI Templates
 - RMI registry browser
- Multi-step process for use:
 - Write or generate interfaces
 - Use RMI wizard or templates to generate files
 - Add code
 - Compile
 - Run and test

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JNDI Support

- Provided by JNDI browser
- Use:
 - Answer questions:
 - Which name or directory service are you accessing?
 - Which JNDI service provider do you need?
 - Looking up entries or binding new ones?
 - What connection info is needed?
 - Access the svc using the JNDI browser
 - Locate item and generate lookup or binding code
 - Paste into your program
 - Run and test

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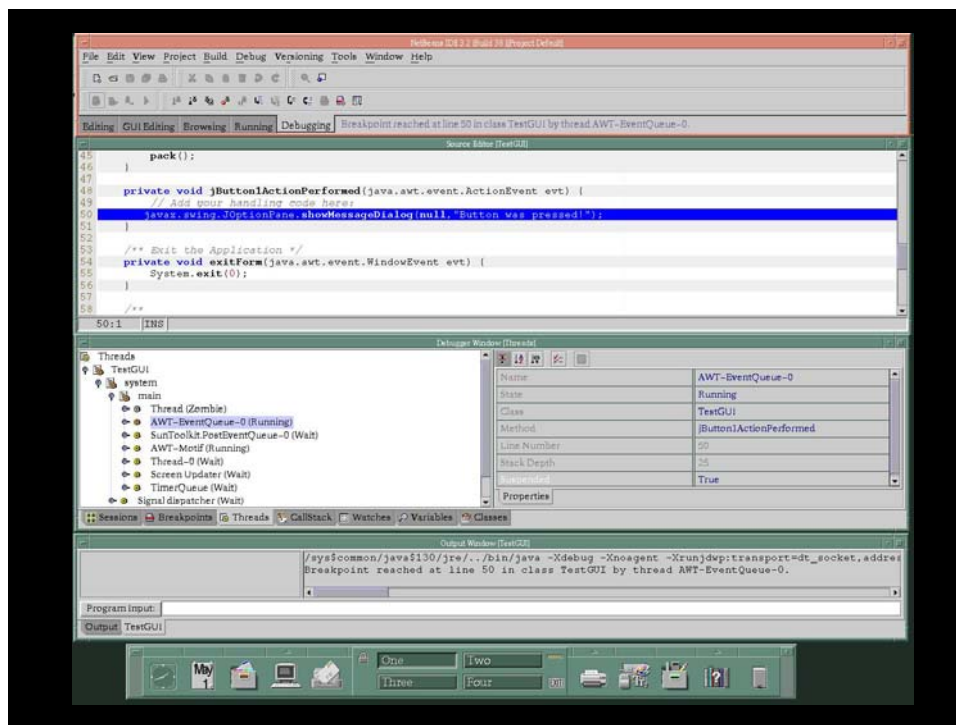
Integrated Debugging

- GUI debugger
- Watches for variables, class instances, and expressions
- Breakpoints
- Connection to remote JVM
- Multiple thread support
- Tracing and stepping

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Support for Multiple JDKs

- Supports external and internal compilers
- Supports JPDA, JDK 1.1 and applet debugging
- Supports internal, external and applet execution
- Additional services like passing special parameters to the JVM

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ANT Support

- Ant is similar to make (“without the wrinkles”) or MMS – it is a build tool
- Advantages
 - Ant is written in Java
 - Ant creates cross-platform scripts
 - Ant uses XML as its scripting language
- IDE provides template for Ant project creation
- Automatic builds based on selected (or default) target
- For more info see <http://jakarta.apache.org/ant>

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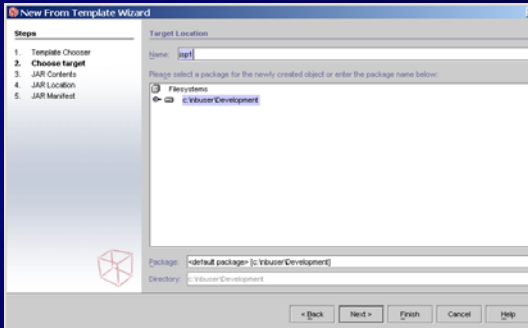
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JAR Packager

- Creates a JAR archive
- Uses JAR contents file
- Call compile on the contents file to create the JAR



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NetBeans on OpenVMS

- Software Requirements
 - OpenVMS Alpha V7.2-1 or later
 - Java™ 2 SDK 1.3.0-1 for OpenVMS Alpha (or later)
 - Fast Virtual Machine (VM) 1.3.0 or later for OpenVMS Alpha
- Hardware Requirements
 - 500MHz minimum Alpha processor
 - 128MB minimum RAM
 - 75,000 blocks minimum free disk space on an ODS-5 disk
- <http://www.openvms.compaq.com/openvms/products/ips/netbeans/>

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NetBeans on OpenVMS (con't)

- Currently NetBeans 3.3 is available (latest) for OpenVMS
- Works just like all the other platforms
- File specifications in the FileChooser and Explorer are Unix-like syntax (Java's fault)
- Can use internal Java compiler or external compiler
- Supports Ant
- Has built-in ICE browser

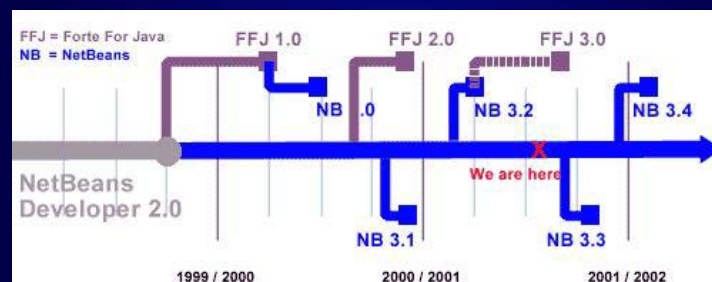
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NetBeans Roadmap



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NetBeans Add-ins for OpenVMS

- Work is progressing on
 - C/C++ support
 - CMS integration
 - EDT keypad editing
- Future plans include
 - Other 3GL support
 - Debugging of 3GLs
 - Distributed NetBeans

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Other Ways to Use NetBeans to Develop Java Apps for OpenVMS

- Run NetBeans on a windows desktop
- Have a Advanced Server share to an ODS-5 disk on an OpenVMS machine
- Make your project directory and mounted file system point to the ODS-5 disk
- Create your app, build and test on Windows
- On the OpenVMS machine simply run the resulting CLASS or JAR file

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Download NetBeans for OpenVMS today from:

<http://www.openvms.compaq.com/openvms/products/ips/netbeans/>

Thank you!

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