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Web Tooling

WebSphere Application Server - Express Beta

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Objectives

- Features of Web tooling

- Describe the tools for Web development

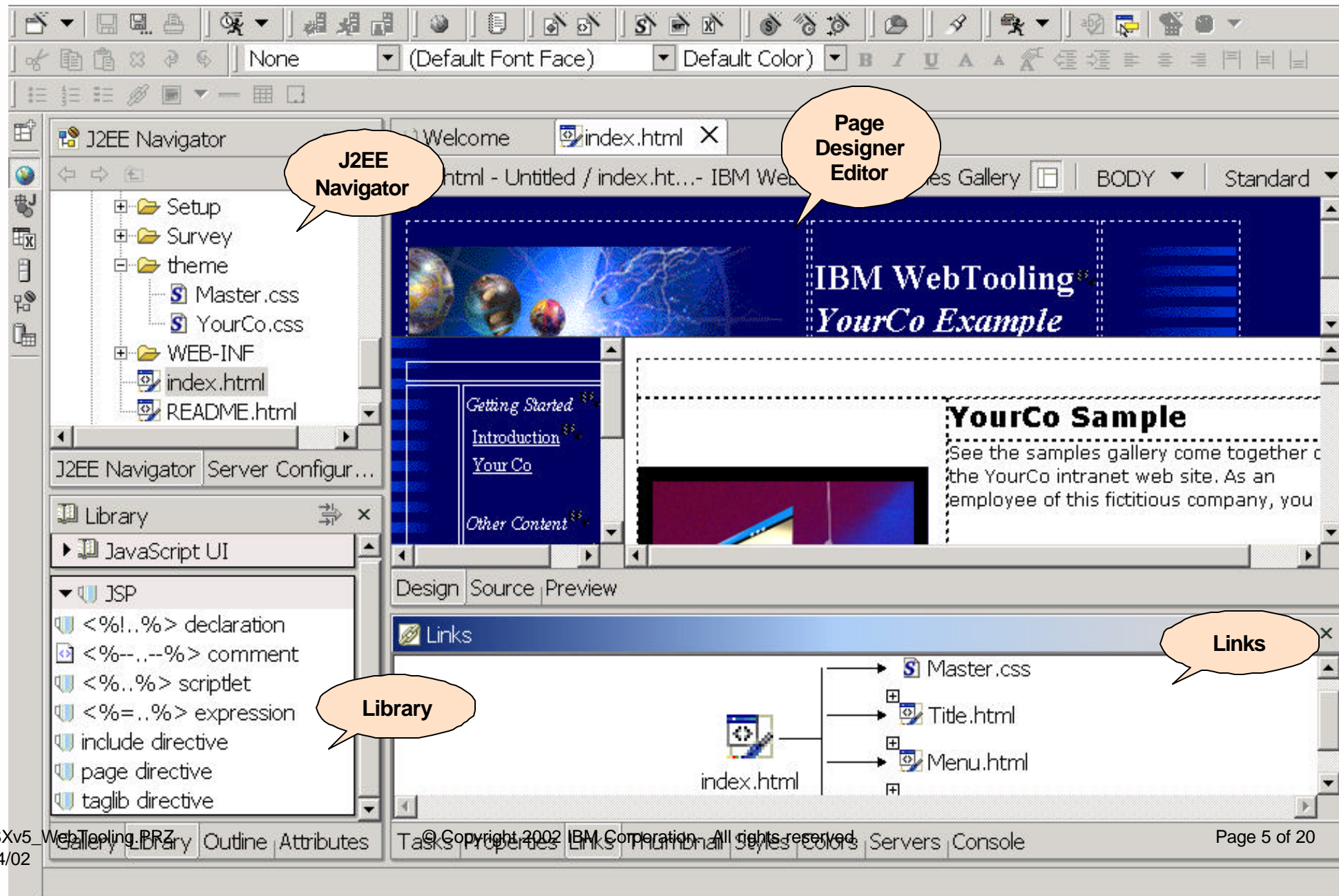- Understand how Web tooling is used to create and deploy a Web application

Web Application Creation and Deployment Process

- Web Applications are built from resources
  - ▶ HTML pages, Images, etc.
  - ▶ JSPs
  - ▶ Servlets

- Resources are manipulated with the tools
  - ▶ Editors
    - – Page Designer (for HTML, JSP, etc.)
    - – Cascading Style Sheet (CSS) editor
    - – Java Script editor
    - – Java Editor (for Servlets)
    - – Web Deployment Descriptor (web.xml) editor
    - – Web Art Designer (for images)
  - ▶ Wizards
  - ▶ Web page creation from Java Bean or Database

- Web Applications are packaged in WAR (Web modules). The WARs are packaged in EAR (Enterprise Application) files, that are deployed to the Application Servers

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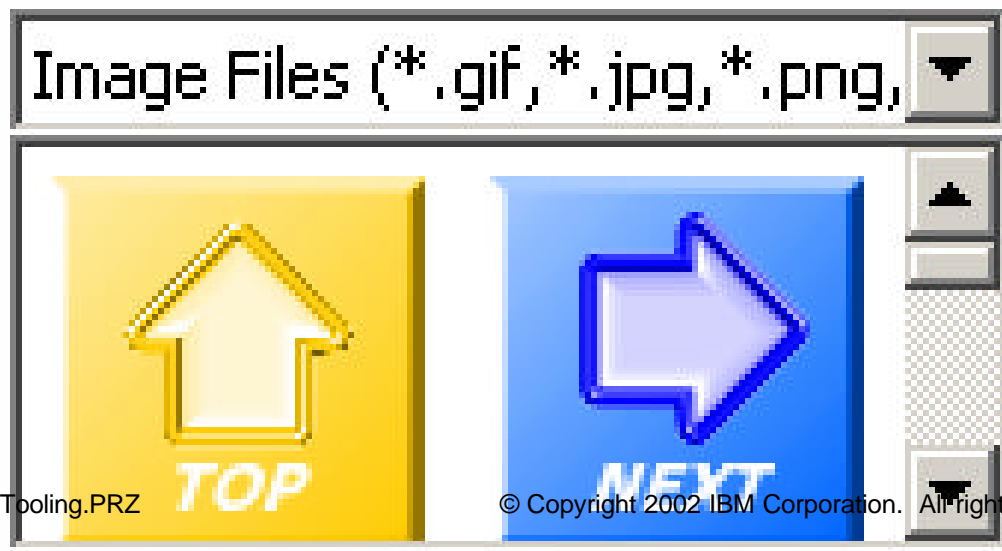# Simple steps to create a Enterprise Web Application

- Create Web Project (module)
  - ▶ Can create its associated New Enterprise application (EAR) or add the Web project to an existing Enterprise Application
- Create any number of Servlets, HTML, JSP resources for the Web project using the appropriate wizard
  - ▶ The wizard will specify the directory under the Web Project to save the files
- If needed, modify the EAR and WAR Deployment descriptor using the appropriate Deployment Descriptor editor
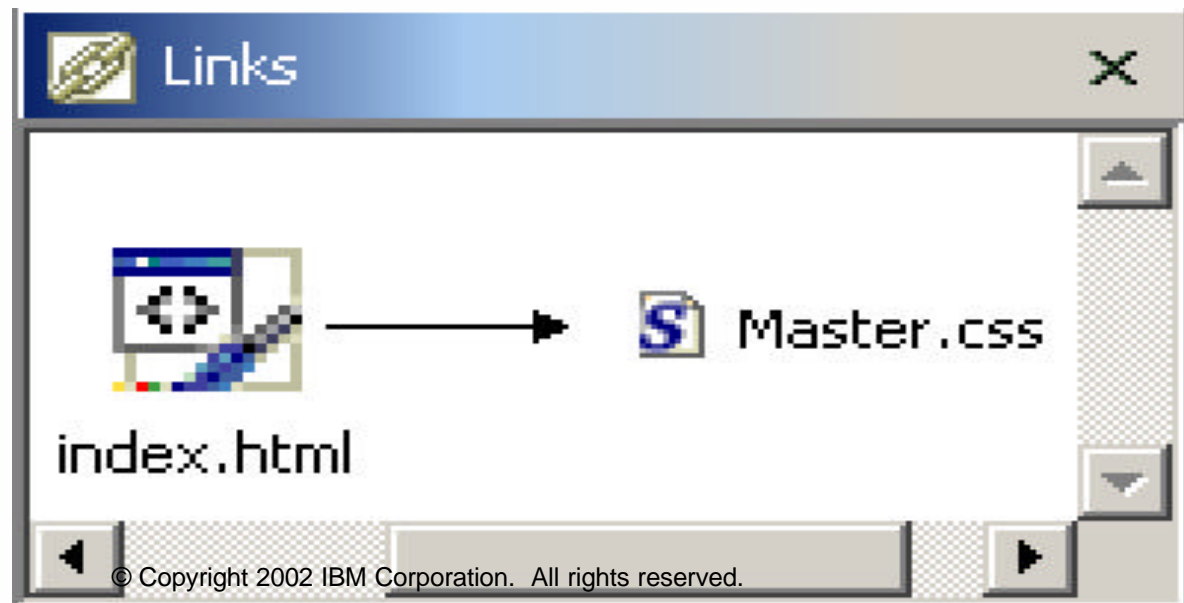
Web Perspective

Web Perspective

- The Web perspective combines views and editors that assist you with Web application development. Some of the views are:
  - ▶ Gallery
  - ▶ Outline
  - ▶ Properties
  - ▶ Links
  - ▶ Thumbnail
  - ▶ Styles
  - ▶ Colors

Link Management Tools: Links View and Link Management

- Links view shows
  - ▶ Files in your projects
  - ▶ Linkages between them
  - ▶ Characteristics of those linkages
- Helps you distinguish between different types of links
- Shows you the number of links to target files
- Indicates where documents have broken links or links to external files
- You can manage links manually or set preferences to control how links are managed when you test/publish a project

New Page Designer

- WYSIWYG environment that enables you to create and work with a resource while viewing its elements on the page
  - ► HTML, JSP
- Rewritten in Java
- Allows you to work with HTML files, JSP files and embedded JavaScript
- Three pages provide different ways to work with the file you are editing
  - ► Design page
  - ► Source page
  - ► Preview page
- Features include
  - ► Support for Visual Custom Tags (discussed later under Web resources)
  - ► XHTML support (discussed later under PvC support)
  - ► Visual Custom Tags for JSP
    - − JSP custom tags to provide better visual rendering in the Design page

  Note: You can still access Page Designer Classic

Pervasive Computing (PvC) Support

- **Page Designer**
  - ▶ Supports HTML 4.0.1 (along with some legacy tags and attributes)
  - ▶ Provides extensibility so page editing modules for plugins can be customized to be suitable for PvC-enabled application development

- **Supported standards include**
  - ▶ XHTML support for the Page Designer Design and Source pages (*)
    - – XHTML 1.0 (Strict, Transitional and Frameset)
    - – XHTML Basic
    - – XHTML mobile profile (defined in WAP 2.0)
  - ▶ WCSS support in CSS Designer and Page Designer
  - ▶ Supported device profiles in Page Designer
  - ▶ WML and CHTML supported in Page Designer

JavaScript Editor

- Editor for editing separate Java Script files (.js)
- Contains all source editor functions
  - ▶ Content assist
  - ▶ Outline view
- Provides two pages
  - ▶ Source page enables you to view and work with a file's source code directly
  - ▶ Preview page shows you how the current page is likely to look when viewed in Microsoft Internet Explorer (by default)

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Cascading Style Sheet (CSS) Editor

- Shows the source of a CSS file and enables you to edit styles with the help of
  - ►Syntax highlighting
  - ►Content assist
  - ►Preview function
- Extends the Eclipse CSS Editor to support CSS2 and to fully support WCCS
- Provides two panes with capabilities that are similar to those of Page Designer but with slightly different orientation and interaction
  - ►Source pane enables you to view and work with a file's source code directly
    - ─Code Assist
  - ►Preview pane shows you how the currently-defined styles are likely to look when viewed in Microsoft Internet Explorer (by default)
- Changes made are immediately applied to the Design page of the Page Designer if the HTML file has a link to the CSS file
- Integrated Styles View
- Gotchas
  - ►Brings styles view to front automatically
  - ►Adds menu items/buttons for new Styles
  - ►Synchronizes selection in preview to the source view

Static Web Project Support

- Web projects that hold static HTML content only
  - No JSPs or Servlets
  - No web.xml
- New Server type: "Static Web Server"
  - Point to an installed HTTP server
  - Publish with file copy or FTP
  - Supports aliases
  - No integrated start and stop mechanism

- Many customers have been asking for this function.

What to Expect for GA

- Minimal new function

- Bug fixes

- Performance tuning

- Improved usability

- Migration

Summary

- Overview of Web tooling

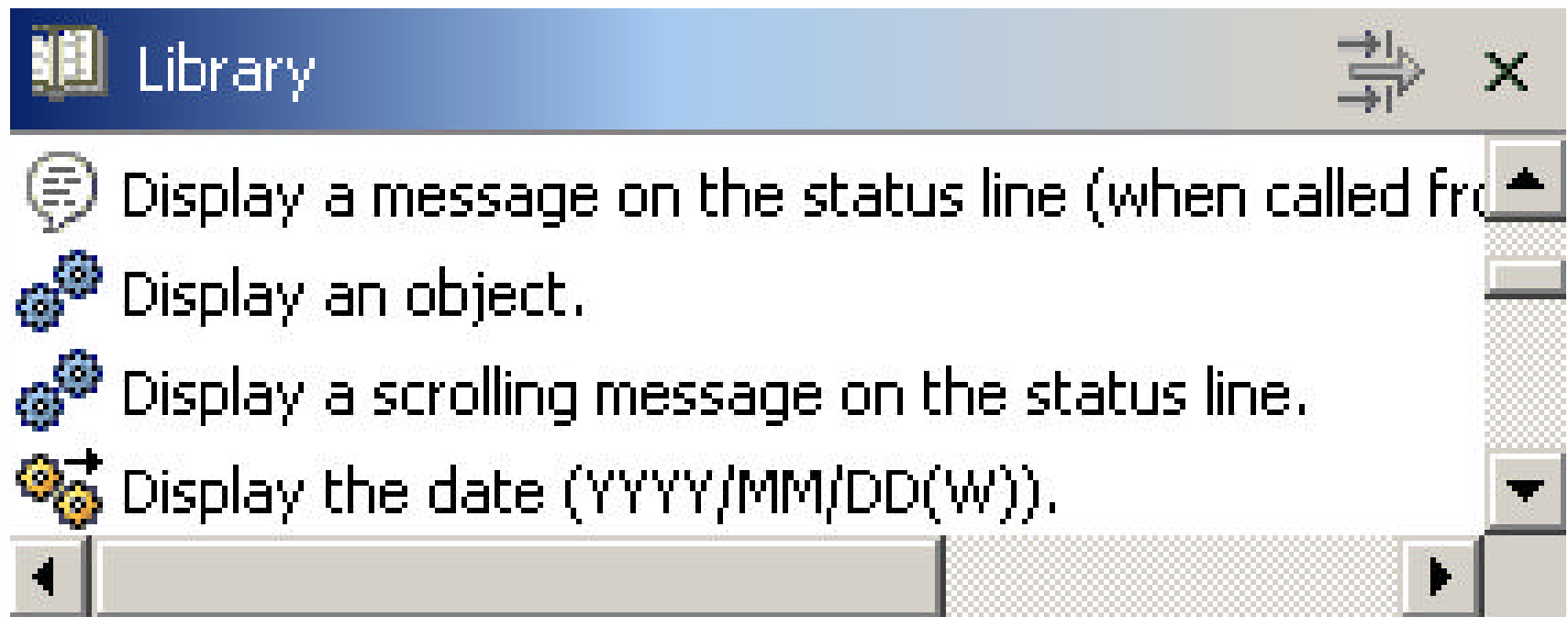- New Web Tooling Features in WSSD V5

Section

Appendix

Web Tooling Overview

- The following tools are the primary means for developing Web applications in the workbench
  - ► Wizards
  - ► Page Designer
  - ► web.xml Editor
  - ► Content assist

Web Perspective: Library View

- Allows you to catalog and organize reusable programming objects (e.g., HTML, JavaScript and JSP code) along with files and custom JSP tags
- Can be extended based on additional objects that you define and include
- Can contain
  - ▶ JavaScript elements
  - ▶ JSP elements
  - ▶ Other categories of programming objects that you define

📖 **Library**   ✕

💬 Display a message on the status line (when called fr▲

⚙ Display an object.

⚙ Display a scrolling message on the status line.

⚙ Display the date (YYYY/MM/DD(W)).   ▼

Workbench Integration with Web Editors

- Many editors are available in WebSphere Studio for various file types
- To edit a file, either
  - ► Double-click on the file in the Navigator view
  - ► Select **Open** from the file's context menu
- The editor last used to open a file becomes the default for that particular file
- To use a different editor, select **Open With** from the file's context menu to choose from a list of available editors

- You can associate file extensions for different resource types with various editors
- Useful views include
  - ► Outline view
  - ► Properties view

Page Designer: Visual Custom Tags

- A JSP custom tag with the ability to render (visualize) itself in the Page Designer Design page
- Benefits include
  - ► JSP custom tags to provide better visual rendering in the Design page
  - ► Custom tag writers can develop their own visualization tags
  - ► Users will be able to change the attributes of custom tags to control their presentation

Removed or "Deprecated" Features

- Some features in the ActiveX Page Designer have NOT been carried forward.
  - ▶ Dynamic elements / tables
  - ▶ Accessibility checker
  - ▶ DTC support
  - ▶ Active X embedding
  - ▶ BiDi support

- Because of this, the ActiveX Page Designer will be available for customers who need it
  - ▶ It is called "Page Designer Classic"
  - ▶ Active via Preferences->File Associations

- Next release will have competitive function in all these areas and "Page Designer Classic" will be removed.

Improved Web Tooling Wizards

- Web Project Wizard
  - Selectable features
    - Support for preconfigured Jakarta taglibs
    - Extendible by other plugins
  - Select J2EE Level

- JSP Wizard
  - Options for doctypes and all page directives
  - Easily import taglibs into a page

- Java Bean Web Pages
  - Now supports complex types on input and output
  - Supports array types on output

Web Perspective: Library View Features

- **Drag-and-drop to Page Designer's Design page and various source editing pages**
  - ► Drag items from the view into the active editor and the text will be dropped into the document at the cursor location
- **Double-click support**
  - ► Double-click on an item and have it inserted at the current cursor position in the active editor
- **User-defined categories and items**
  - ► Define/edit/remove view category items
- **Plugin-defined categories and items**
  - ► Plugin developers can contribute a default list of items to their own categories
- **Variables in insertions**
  - ► When variables are inserted, you will be prompted for values for each variable
- **Category filtering**
  - ► Select which categories are shown in the Library view
- **Custom insertion**
  - ► Plugin developers can customize the behavior of items so that when they are dropped during a drag/drop action, both the text that is inserted and the insertion location are strictly defined
- **Category organization**
  - ► All categories and items within them are displayed alphabetically by default

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