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WDSC: Getting Started with the IBM WebFacing Tool

Alison Butterill
butteril@ca.ibm.com


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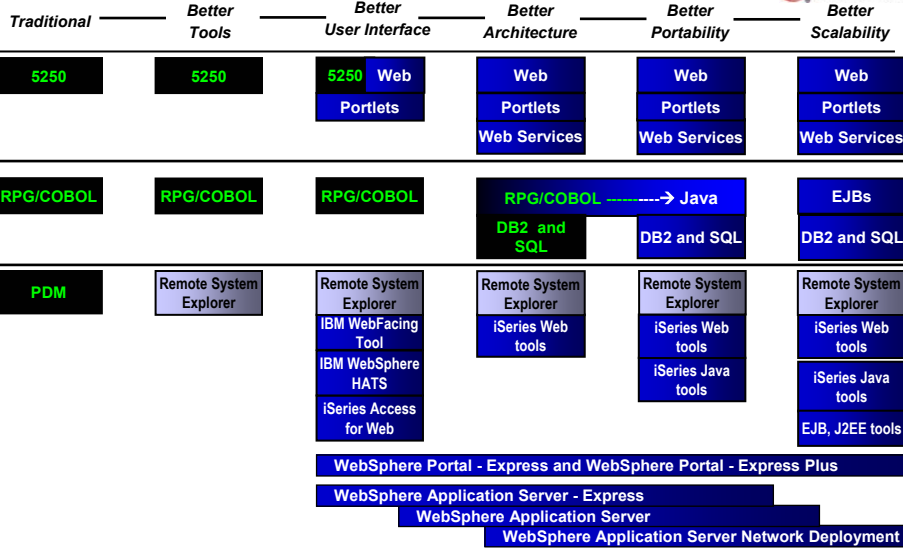
-  **Background**
- **Using the IBM WebFacing Tool**
 - **The steps**
- **Customizing the Result**
- **Examples and Summary**

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iSeries Developer Roadmap – Version 2



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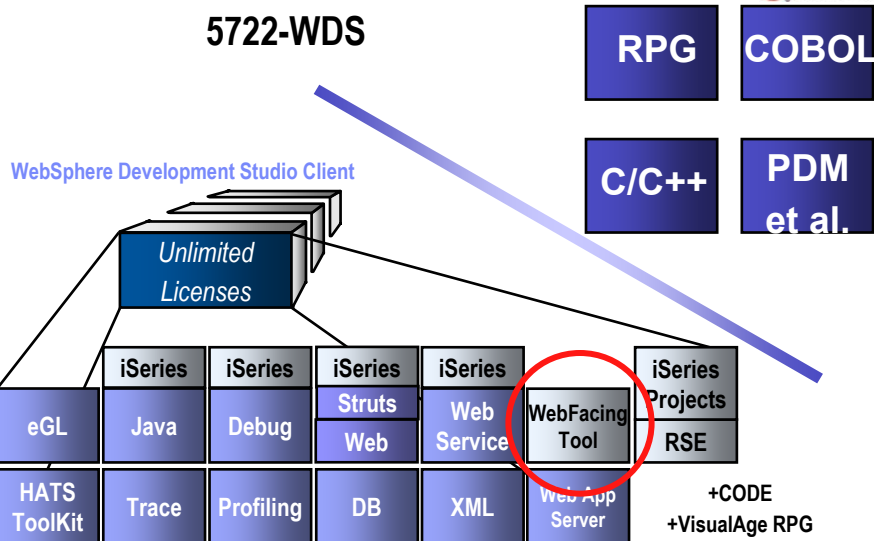
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WebSphere Development Studio for iSeries



5722-WDS



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Advanced Functions



WebSphere Development Studio client for iSeries Advanced Edition (WDS AE)

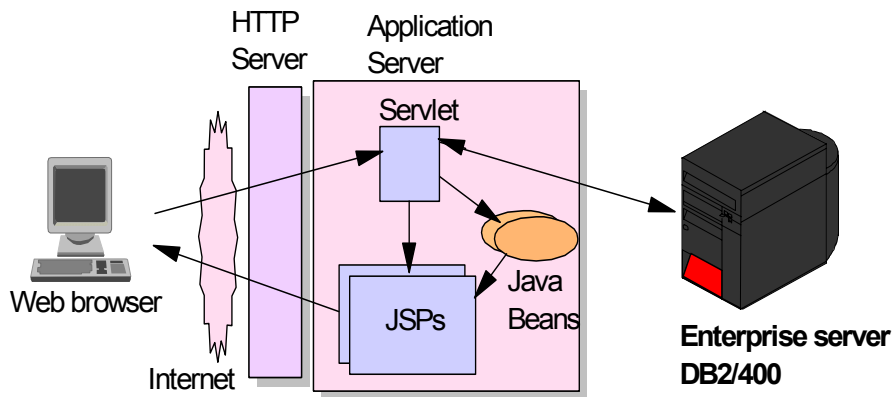
iSeries*	iSeries	iSeries	iSeries	iSeries	Adv'd Features*	iSeries	+CODE
eGL	Java	Debug	Struts Web	Web Service	WebFacing Tool	Projects RSE	+VisualAge RPG
HATS ToolKit	Trace	Profiling	DB	XML	Web App Server	EJB*	Test Case*
						J2EE*	

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Architecture of a Web Application



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IBM Goals of WebFacing

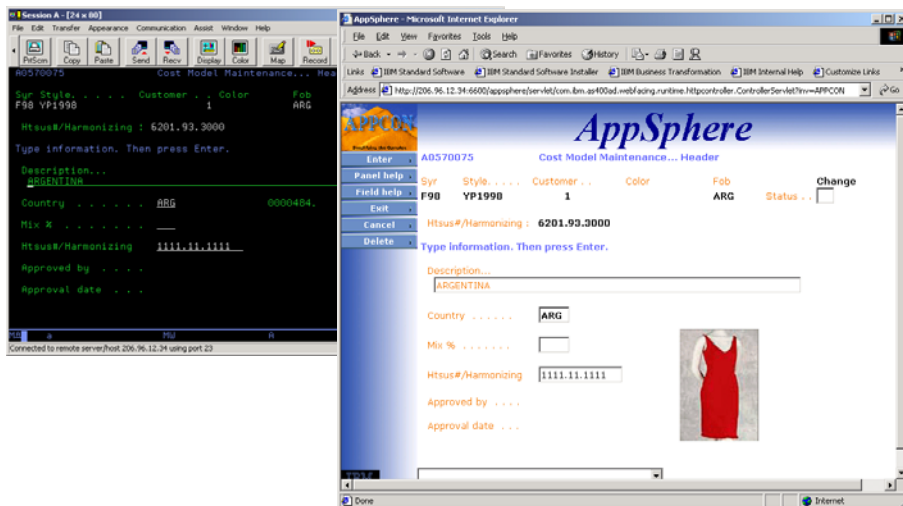


- **Quickly Web Enable existing applications**
 - No programming changes required
- **Unlimited refinement**
 - Using existing DDS skills
- **Cost effective**
 - Tool part of WDSi tool set
 - Runtime part of operating system
 - Only pre-req is WebSphere Application Server Express or higher
 - Now included in i5OS (V5R3)

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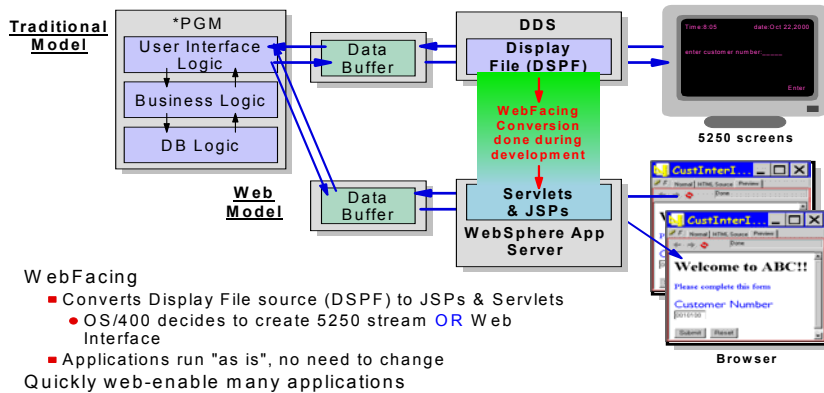
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IBM The IBM WebFacing Tool



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- Two components:
 - **Development-time tool conversion**
 - Creates Web page source code (JavaServer Pages (JSPs)) from Display File DDS source
 - **Run-time intercept component**
 - passes application data to the Web application, bypassing the creation of the 5250 data stream
 - Enables existing applications to run without change

- Background
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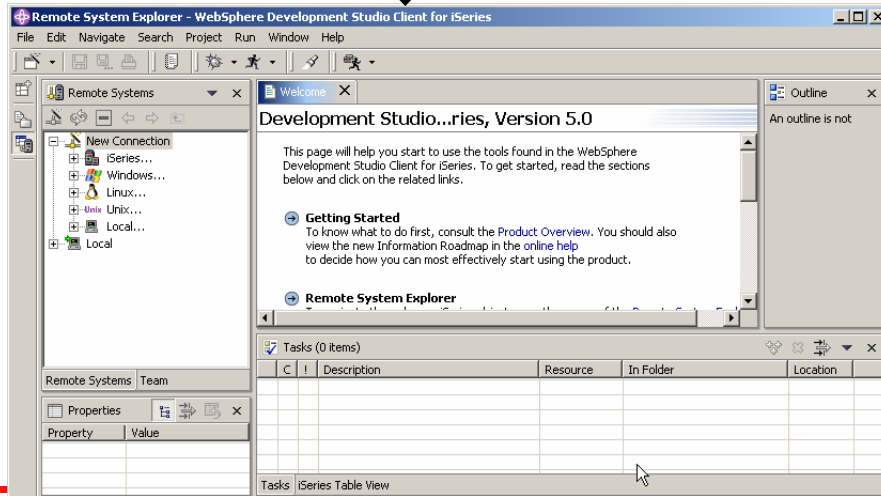
- 1. Create the new WebFacing project**
 - Specify members to convert, the look and feel, style and how to invoke the application
- 2. Convert the project**
 - Creates Web stuff from the DDS and UIM source
- 3. Run it!**
 - Select “Run on Server” to run in built-in WebSphere
- 4. Refine it**
 - Using Web Settings in CODE Designer (launched from WebFacing)
 - Using project’s Properties dialog
- 5. Repeat**
- 6. Export as EAR file, import into WebSphere Application Server on iSeries**
 - Or use built-in server-tools support to publish to WebSphere Application Server on iSeries



Start the WDSc WorkBench



Development Studio Client Advanced Edition for iSeries 5.1.2.Link



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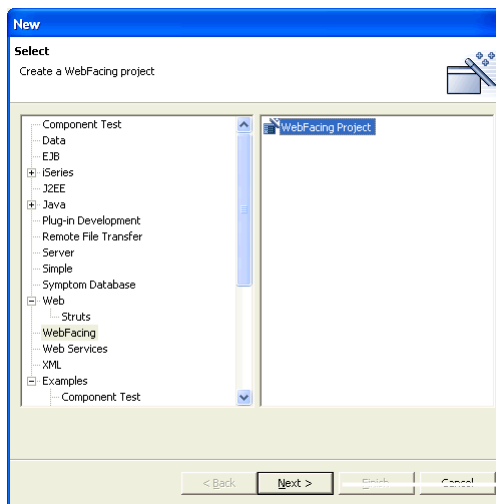
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Create a New WebFacing Project

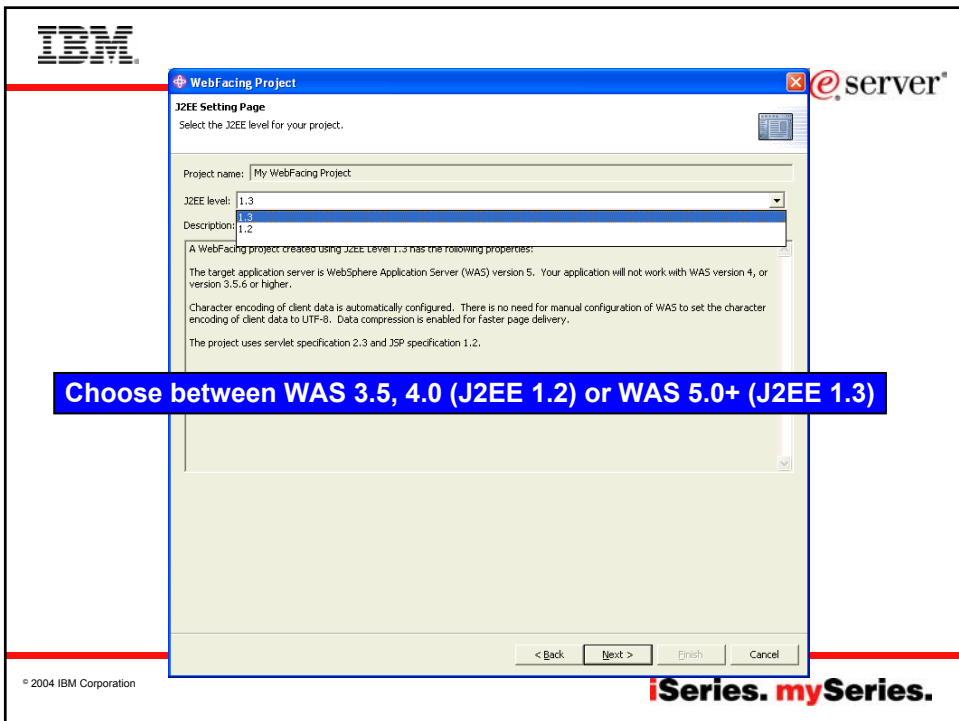
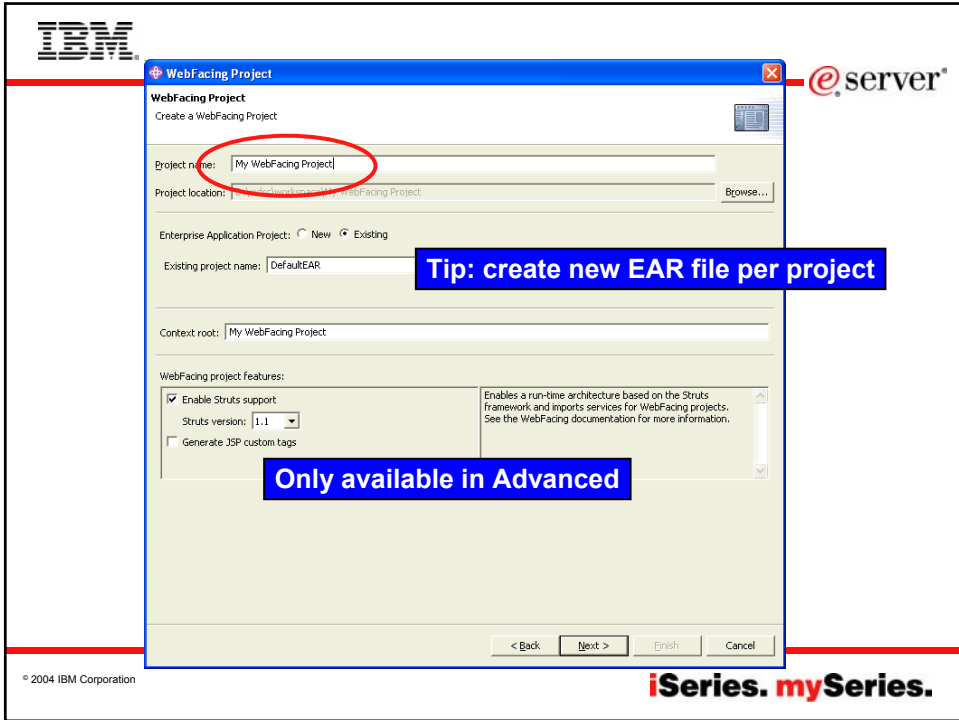


Use File->New->Other



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WebFacing Project

Select Display File Source Members To Convert
3 members added for QDSSRC

Project name: My WebFacing Project

Connection: toras07m

Library: *LIBL File: *ALL Member: *ALL
Member types: DSPF MNUDDS

Click Refresh DDS list button, then select files or members and add them to the table for conversion:

Refresh DDS list

Library	File	Member
ORCLIB	QDSSRC	ORDENTD
ORCLIB	QDSSRC	SLTCUSTD
ORCLIB	QDSSRC	SLTPARTD

TORAS07M *LIBL *ALL *ALL DSPF MNUDDS

- POPATP270
- POPATD270
- POPARP270
- POPARR
- QGPL
- POPARS270
- GUITEST
- WDTLAB
- ORCLIB
 - QCLSRC
 - QCMSRC
 - QDSSRC
 - ORDENTD
 - SLTCUSTD
 - SLTPARTD

< Back Next > Finish Cancel

Select DSPF and MNUDDS members to convert



WebFacing Project

Select UIM Source Members To Convert
1 members added for QPNLSRC

Project name: My WebFacing Project

Connection: toras07m

Library: *LIBL File: *ALL Member: *ALL

Click Refresh UIM list button, then select files or members and add them to the table for conversion:

Refresh UIM list

Library	File	Member
ORCLIB	QPNLSRC	ORDENTRPNL

TORAS07M *LIBL *ALL *ALL PNLGRP

- QUSRSYS
- COLTHAR
- QTEMP
- POPATP270
- POPATD270
- POPARP270
- POPARR
- QGPL
- POPARS270
- GUITEST
- WDTLAB
- ORCLIB
 - QCLSRC
 - QCMSRC
 - QDSSRC
 - QPNLSRC
- ORDENTRPNL

< Back Next > Finish Cancel

Select UIM panel groups (help) to convert



WebFacing Project

Specify CL Commands

Enter the CL commands that are used in your application, the command labels you want to use, and the signon preference for the generated hypertext links.

Project name: My WebFacing Project

WebFacing generates hypertext links that you can use to launch your application from the web. In order to do this, it needs to know the text that will be shown for each link and the CL command that each link will invoke. On this page you can define multiple links, in case several CL commands are used to launch your application.

If your program requires parameters, you can enter them as variables in the CL command. For example: to invoke program MYPGM with a part number parameter, you would enter CALL MYPGM PARM(%part) as the CL command. The variable "%part" will be replaced when you click on the invocation link. For details, refer to the generated index.html file. The invocation name is used to uniquely identify each hyperlink in the index.html file.

CL command: CALL ORDENTR

Command label: Order Entry

Invocation name: NormalInvocation

Prompt for signon

Sign on with specified values

User ID: _____

Password: _____ Confirm password: _____

CL Command	Command Label	Invocation name	User ID	
CALL ORDENTR	Order Entry	NORMALINVOCATION	*PROMPT	Delete
				Move Up

< Back Next > Finish Cancel

Specify how to invoke application

Specify how to signon

Can specify multiple invocation commands - Each becomes a link in index.html



WebFacing Project

Choose a Web Style

Select a "Look and Feel" style to use for the project.


Enable for Web Site Designer

Select classic WebFacing style

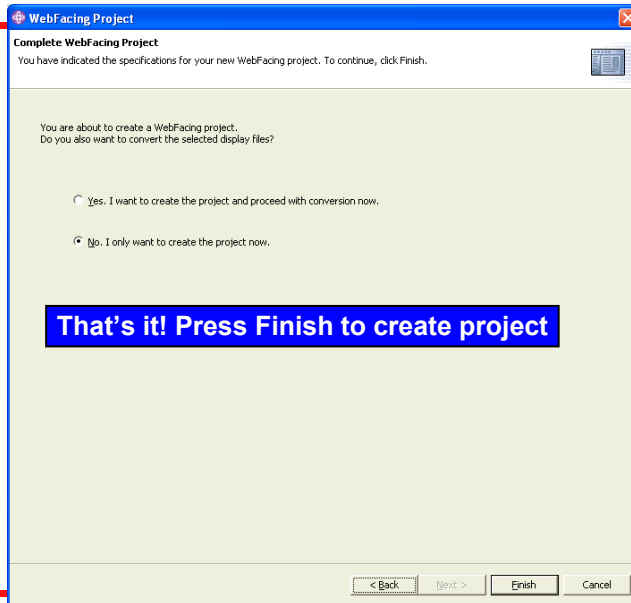
Select a predefined or previously customized style:

- avenue
- corporate1
- fun
- gradient
- sope
- sage1
- text/buttons

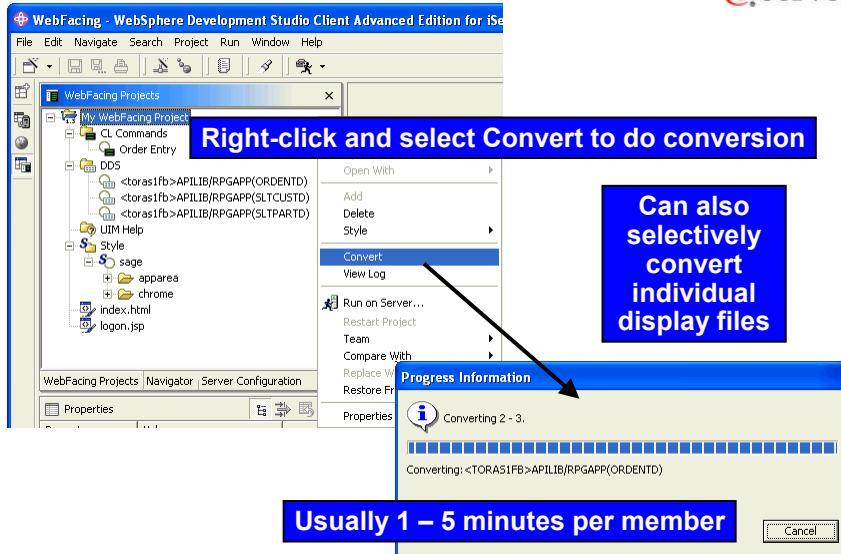
Select a style for the look and feel:
- IBM supplied
- User defined



< Back Next > Finish Cancel



That's it! Press Finish to create project



Right-click and select Convert to do conversion

Can also selectively convert individual display files

Usually 1 - 5 minutes per member

Display files
This section lists all display files that have been converted.

- APILIB/RPGAPP(ORDENTD)
- APILIB/RPGAPP(SLTCLUSTD)
- APILIB/RPGAPP(SLTPARTD)

Records
This section lists all the records in the converted display file.

- PROMPT
- ORDSFL
- ORDCTL
- ALTORDER
- FKEY

Errors
This section lists all errors for the selected object.

- All messages
- Compile messages only
- Conversion messages only

Message ID	Line	Severity	Message Text
DDX0021	10	Warning	Keyword HELP for second level message text is not yet supported for conversion

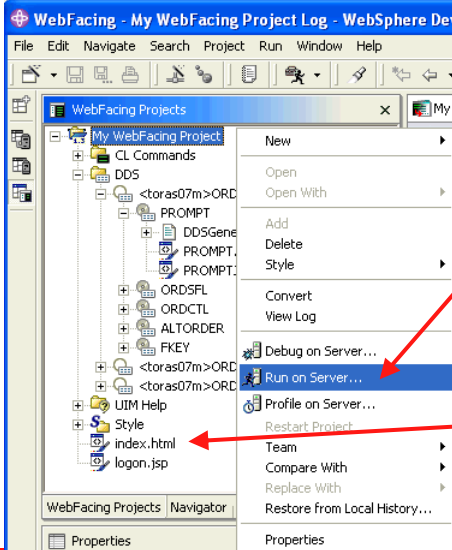
Conversion gives detailed log of all keywords encountered

See product help for list of unsupported keywords

WebFacing Projects

- My WebFacing Project
 - CL Commands
 - Order Entry
 - DD5
 - <toras1fb>APILIB/RPGAPP(ORDENTD)
 - PROMPT
 - DDSGeneratedData.jar
 - PROMPT.jsp
 - PROMPTJavaScript.jsp
 - ORDSFL
 - ORDCTL
 - ALTORDER
 - FKEY
 - <toras1fb>APILIB/RPGAPP(SLTCLUSTD)
 - PROMPT.jsp
 - <toras1fb>APILIB/RPGAPP(SLTPARTD)
 - UIIM Help
 - Style

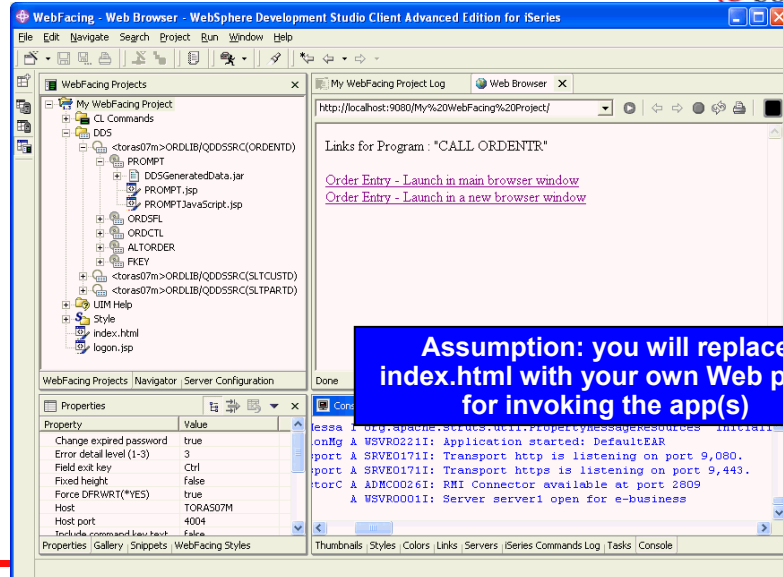
After conversion, you can see generated files per record format – 2 JSPs per format



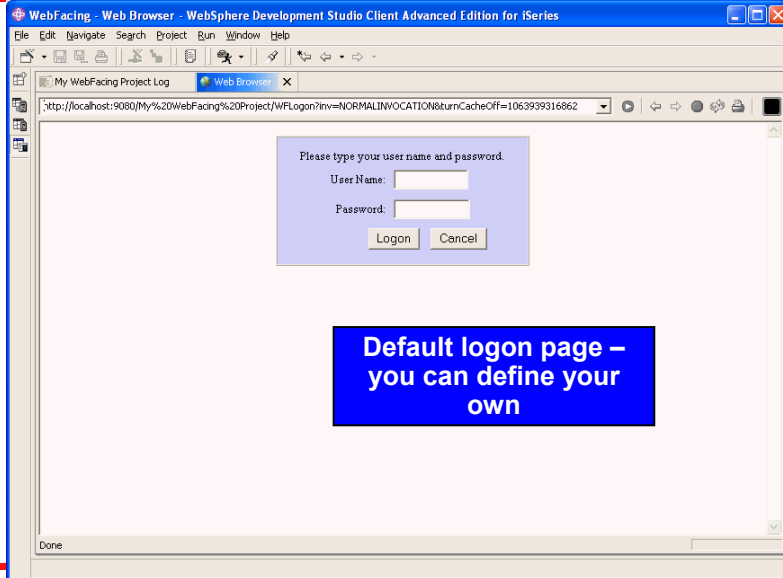
Run On Server runs Web app in built-in WebSphere Test Environment

Time to run it!

Starts index.html

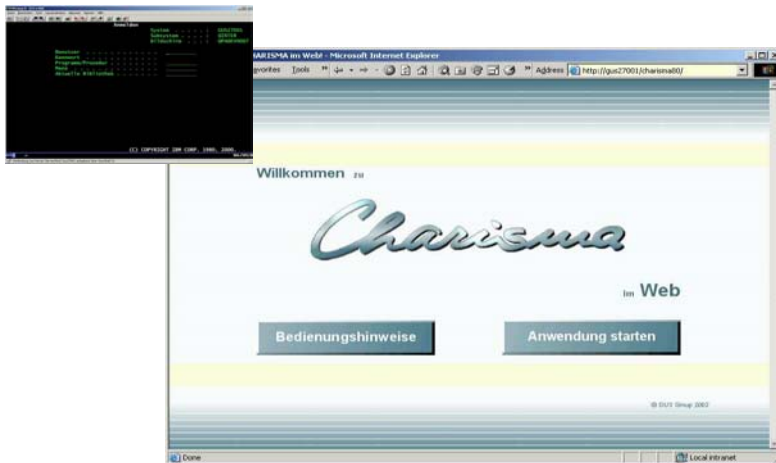


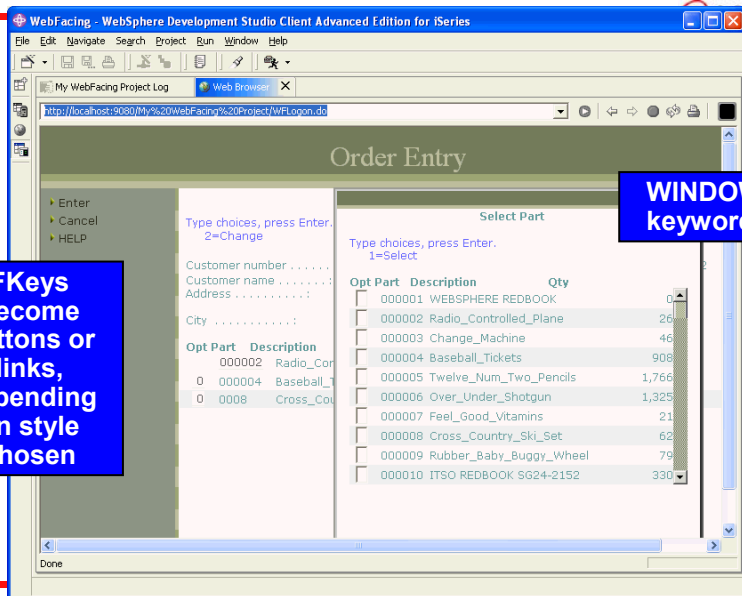
Assumption: you will replace index.html with your own Web page for invoking the app(s)



Default logon page –
you can define your
own

Customized Signon Page – Example





**FKeys
become
buttons or
links,
depending
on style
chosen**

**WINDOW
keyword!**

Deploying to Remote WebSphere

- 1. Use File->Export to export EAR file**
 - Export to a mapped IFS drive
 - Use WebSphere Administrator Console to import EAR file
 - Bring up Browser, enter URL to start application
- 2. Use Server Tools for iSeries WAS and use "Publish" to move EAR to IFS -> use "Run On Server" to execute**
 - This also replaces the server's configuration file
 - So use a dedicated WAS instance for testing
 - **Tip:** look at Change Management tools to assist with automating delta deployments

- Background
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- 1. By Properties**
 - Much can be affected in the conversion and runtime, including overall style, by use of properties and style wizard
- 2. Customizing the Style Sheet**
 - Modify created style sheet
 - Create new one
- 3. By Web Settings**
 - These are DDS comments for affecting the conversion results. Easy to set with the CODE Designer tool
- 4. By Editing the Output**
 - Because of the built-in Java and JSP editors, you can always edit what WebFacing generates
 - But be careful....

Affect conv'rsn

Affect runtime

Affect style

Properties for My WebFacing Project

Conversion

- Command Key Recognition
- Command Key Button Labels
- Edit Code Options
- MNUDDS Options**
- XML Record Metadata
- Custom Tags

Run Time

- Project
 - DDS Object Mappings
 - UIM Object Mappings
 - Web
 - Struts
 - Command Key Actions
- Style
 - DDS Field Color
 - DDS Field Display Attribute
 - Window
 - Subfile
 - Command Keys

MNUDDS Options

If you have selected DDS members of type MNUDDS for conversion, you can convert the menu options into hypertext links. The command option number and any text included in the same field where that number is found will be converted into a hypertext link.

Convert menu options into hypertext links

Select a separator to identify the menu options:

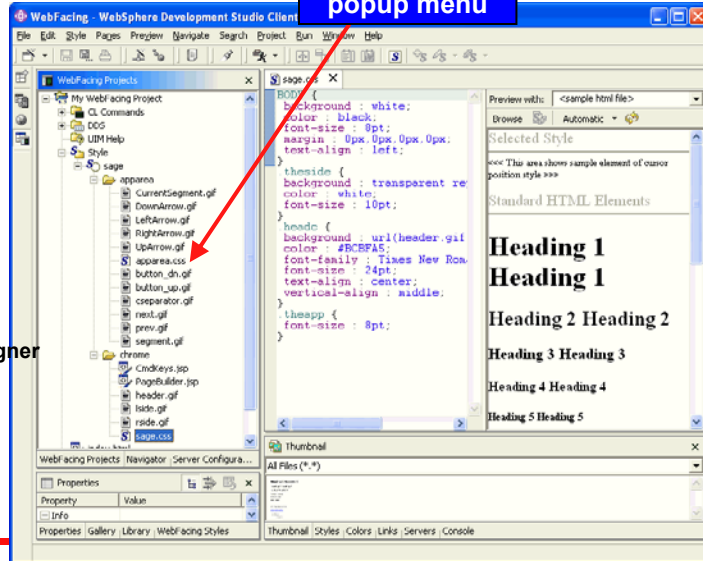
Separator: .

- Customize DDS UI constructs for the web
- Cascading Style Sheets (CSS) based implemented as CSS classes
 - DDS field
 - color
 - display attributes
 - Window
 - Subfile
 - Command keys
 - roll-over and button-down effects
- Change WebFacing CSS classes
- Add new CSS classes

Tip: Use Save As from style's popup menu

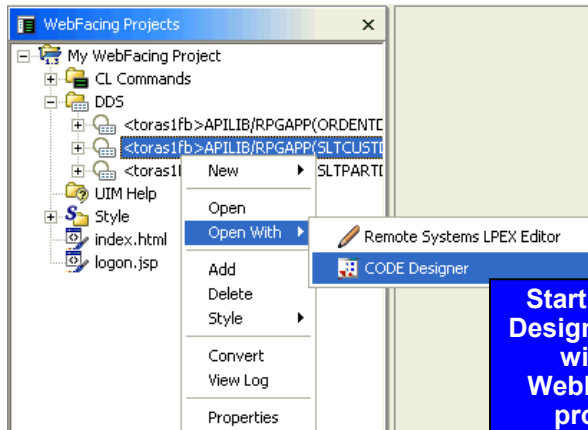
Change the look and feel of the whole application by editing the .css file

Open with -> CSS Designer



3. Customizing the Web Settings

- Places Converter directives into DDS Source
 - appear as comments with special characters
 - DDS unaffected



Start CODE Designer from within WebFacing project



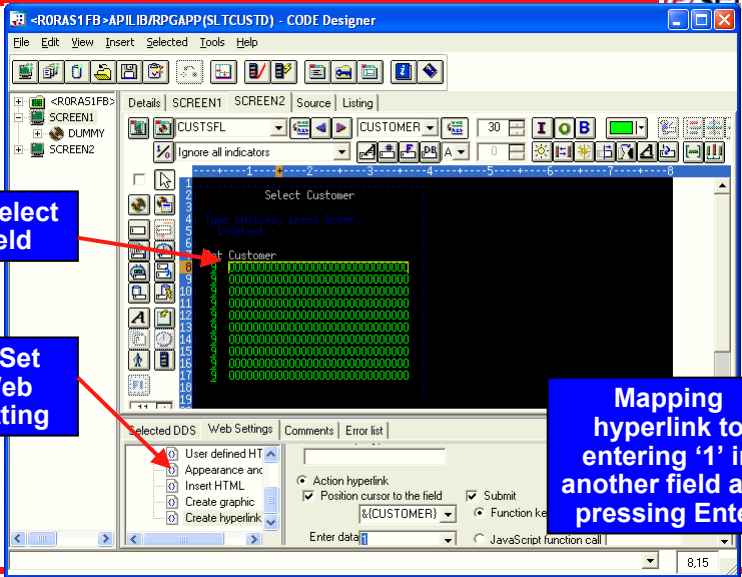
Example



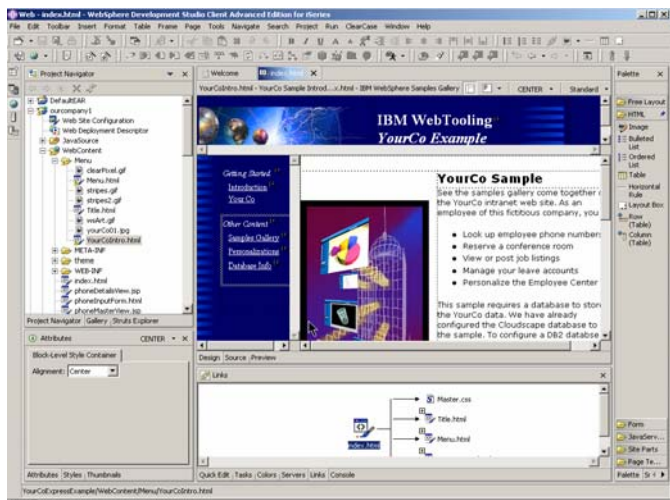
1. Select field

2. Set Web Setting

Mapping hyperlink to entering '1' in another field and pressing Enter



4. Customizing the Output JSP – Web Tools

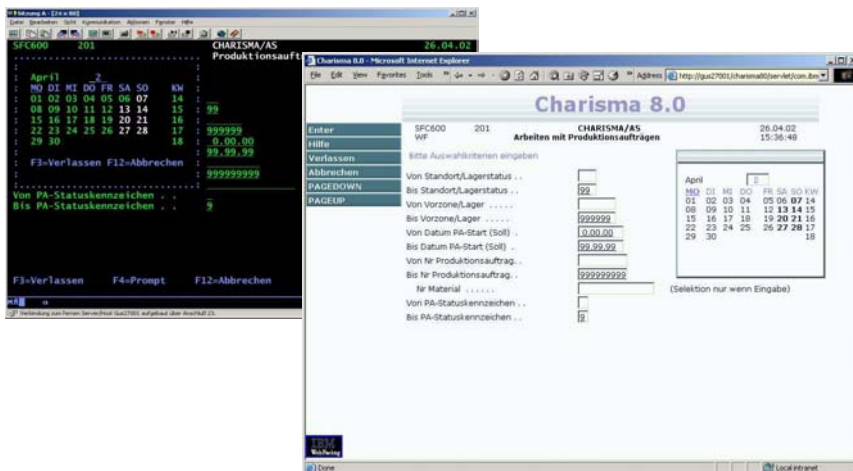


IBM Table of contents



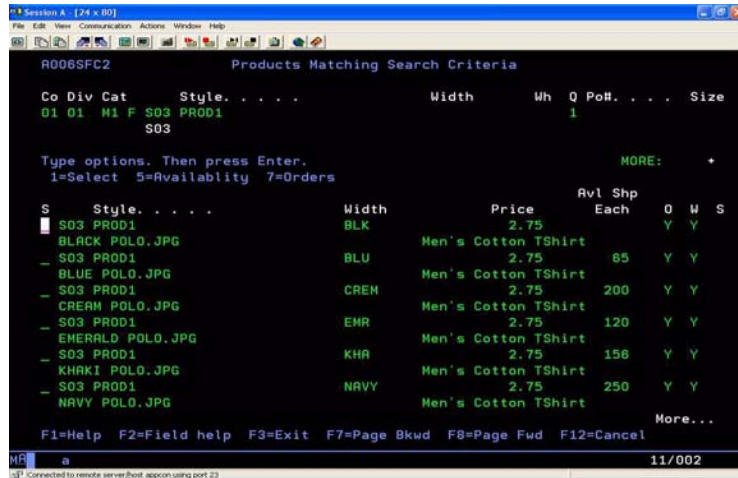
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IBM GUS Green Screen and Customized Version





APPCON Order Entry Screen



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Courtesy: APPCON

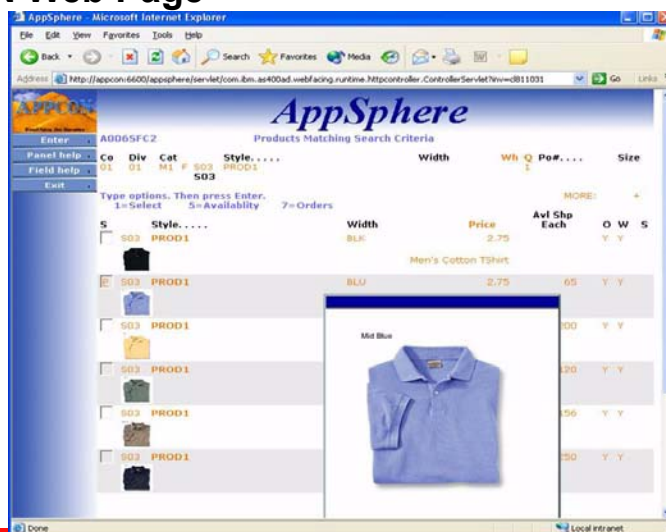
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APPCON Web Page



WebSettings
used to
create the
small images
in the subfile



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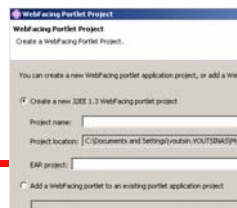
Courtesy: APPCON

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IBM Advanced Features

Available only in **WDCS Advanced Edition**

- Command Key Support
 - No conversion required to support
 - Add functional enhancements or urls
 - Extends the Struts model
- System Screen Support
 - Converts non-DDS System Screens “on the fly”
 - Detects system screens during application flow and converts to web-GUI
 - UIM based system screens (eg WRKSPLF)
- Single Sign-on (EIM)
 - Can share authentication between WebFacing and other web apps
- Portlet Support
 - IBM WebSphere Portal



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IBM Resources

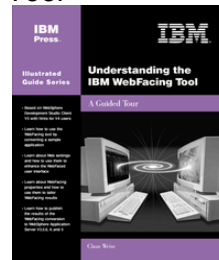
- Redbooks



- SG24-6600 “WebSphere Development Studio client for iSeries – Bring a New Life into Your 5250 Applications”
- SG24- 6801 “The WebFacing Tool – Convert iSeries 5250 Apps to Browser Based GUIs”
- SG24-6331 “Mastering the IBM WebFacing Tool

- Books

- Understanding the IBM WebFacing Tool
- ISBN: 1-931182-09-4
- www.mcpressonline.com/ibmpress



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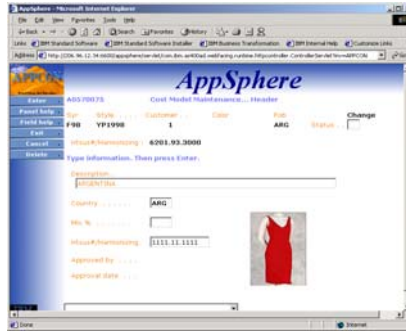
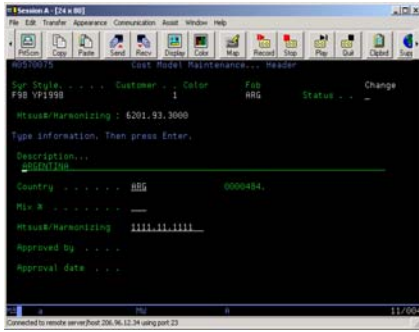
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Summary



- Quick conversion
- Unlimited refinement
- Cost effective



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