IBM WebSphere Transcoding Publisher, Version 3.5
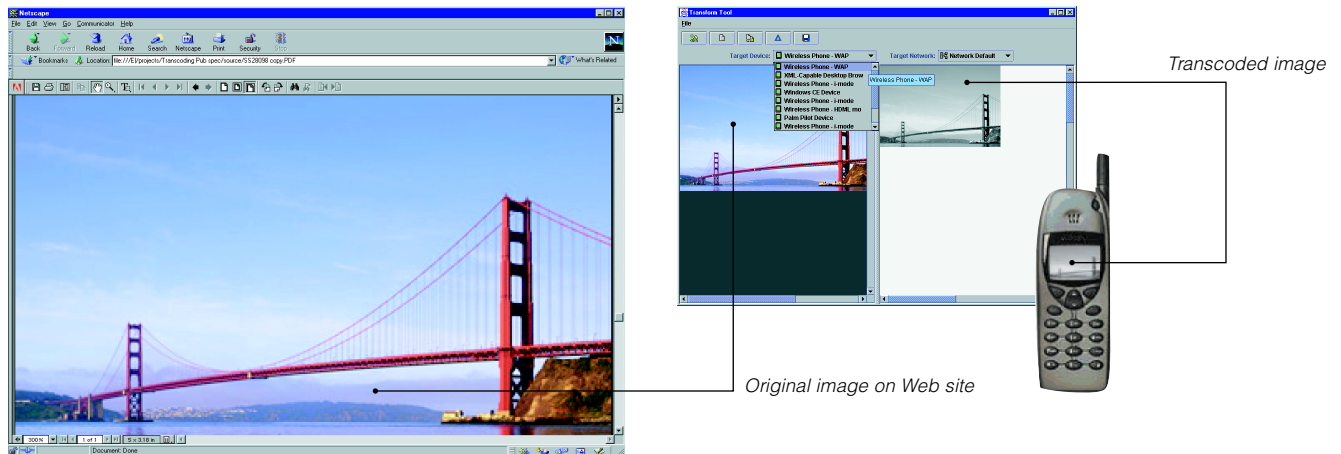

Transcoded image

Original image on Web site

Figure 1. With IBM WebSphere Transcoding Publisher, you can dynamically adapt the content of your Web site for a wide variety of pervasive devices.

Highlights

- **Dynamically transcodes HTML content to WML, HDML, i-Mode, VoiceXML and ClipperML for Palm.Net devices**

- **Streamlines delivery across disparate network environments by reducing the amount of data sent to the end user**

- **Supports content customization techniques that allow you to select and tailor content for an optimized wireless Internet experience**

- **Presents XML content to virtually any device by applying appropriate XSLT stylesheet**

- **Includes deck fragmentation, allowing Web content to be dynamically broken into smaller pieces in response to device memory limitations**

- **Minimizes the need for multiple versions of your Web site by dynamically adapting content for a variety of pervasive devices**

- **Converts, reduces and eliminates images to match display capabilities and to optimize delivery to constrained devices**

- **Integrates with IBM WebSphere software platform for e-business**

*A flexible, standards-based solution to optimize
the wireless Web experience*

As e-business moves from the desktop to pervasive computing devices, delivering greater access to your enterprise and Web content is vital to remain competitive. IBM WebSphere® Transcoding Publisher, Version 3.5 converts content from the wired Internet to formats that can be used on wireless devices without the need to reauthor or create an entirely new Web site. With WebSphere Transcoding Publisher you have a simple solution to the complex problem of extending the reach of your data and applications across diverse business systems to a variety of pervasive devices.

WebSphere Transcoding Publisher is designed to help you provide seamless access to mobile employees, customers, trading partners and resellers across the Internet, extranets and intranets — quickly and cost effectively. WebSphere Transcoding Publisher can dynamically adapt, reformat and filter your Web content*, minimizing the need to generate and maintain multiple versions of Web content or applications to support different target devices and environments.

WebSphere Transcoding Publisher consists of several interrelated components that provide an open, extendable platform to adapt your data to the pervasive computing environment. The primary components include:

- *A set of standard transcoders to transform Web content for nontraditional Internet-capable devices*
- *An infrastructure so versatile that you can write your own transcoders, device profiles and stylesheets and plug them in with ease*
- *An administration console with the ability to add, enable and change profiles, transcoders, stylesheets and external annotation files*
- *A developer's toolkit that provides specific GUI-based tools, sample programs, sample stylesheets, sample annotation files and detailed documentation to help you add or build custom transcoding solutions*

Extend the reach of your Web content
WebSphere Transcoding Publisher dynamically transforms data so that it is suited for new environments, including the wireless Internet. This approach virtually eliminates the need to reauthor content and the burden of maintaining multiple versions of your data so that the information can be viewed by almost any end user, anywhere.

With more wireless subscribers than ever gaining Internet access through handheld devices, you need to be able to leverage existing investments in HTML- and XML-based content to reach wireless Internet users. With WebSphere Transcoding Publisher, content is dynamically adapted for use with a wide variety of pervasive devices, including personal digital assistants (PDAs) and Internet-enabled phones like Wireless Application Protocol (WAP) phones, Handheld Device Markup Language (HDML) phones and i-Mode phones, as well as traditional, voice-only phones. As a result, the need to create multiple versions of your Web site is greatly minimized.
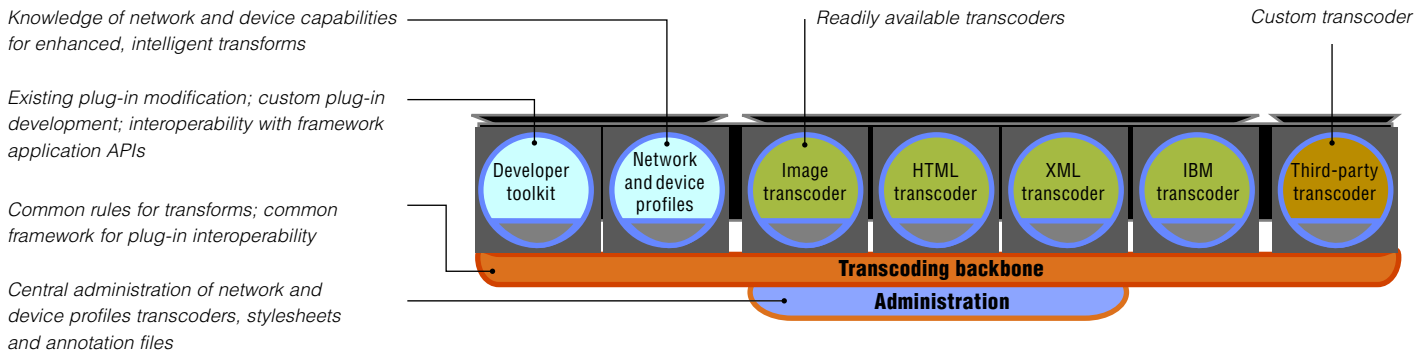
Knowledge of network and device capabilities for enhanced, intelligent transforms

Existing plug-in modification; custom plug-in development; interoperability with framework application APIs

Common rules for transforms; common framework for plug-in interoperability

Central administration of network and device profiles transcoders, stylesheets and annotation files

Readily available transcoders

Custom transcoder

Developer toolkit

Network and device profiles

Image transcoder

HTML transcoder

XML transcoder

IBM transcoder

Third-party transcoder

Transcoding backbone

Administration

Figure 2. Transcoding plug-in layer

By dynamically bridging the different text and image formats and tailoring content to the specific device, WebSphere Transcoding Publisher helps you reach new markets and offer new services.

WebSphere Transcoding Publisher abstracts the complexity of communicating over disparate wireless networks and device types so you can concentrate on your core competencies. A broad selection of transcoders allows you to modify your Web data and images for display on mobile client devices. Standard WebSphere Transcoding Publisher transcoders can be used independently or in conjunction with one another for more complex content transformations.

Standard transcoders include:

- *HTML to simplified HTML*
- *HTML to Wireless Markup Language (WML)*
- *HTML to i-Mode (a variant of compact HTML)*
- *HTML to HDML*
- *HTML to VoiceXML*
- *HTML to ClipperML for Palm.Net devices*
- *XML to a wide variety of formats through the use of Extensible Stylesheet Language Translation (XSLT) stylesheets*
- *Image transcoding*
  - *JPEG images to GIF and WBMP formats*
  - *GIF images to JPEG and WBMP formats*
  - *Can also rescale and reduce quality of images*

You can quickly deploy additional transcoders into the extensible framework to respond to changing market conditions. The toolkit provides samples and documentation that show you how to write transcoders that can easily plug into the framework.

Streamline content delivery across wireless networks

The challenge in today's marketplace is to deliver content across a variety of networks. As businesses and consumers integrate pervasive devices with their everyday habits, content needs to be streamlined so information is provided efficiently across costly, lower-bandwidth wireless networks. WebSphere Transcoding Publisher helps make accessing content across the wireless Internet quicker and easier—delivering only what you need, when you need it.

Therefore, even when the target device can render HTML content, WebSphere Transcoding Publisher can streamline delivery by converting images to links that can retrieve the displaced images and by removing features not supported by the device, such as JavaScript™, applets or Shockwave files.

WebSphere Transcoding Publisher also converts, reduces or eliminates images to match display capabilities and optimize delivery to constrained devices. You can send smaller image files faster over wireless networks; smaller image files render quickly on small-screen devices. This capability saves the time it would take for the device itself to discard or alter images. Before sending content to the device, WebSphere Transcoding Publisher also dynamically partitions the content into smaller segments to match the minimal memory capacities of Internet-enabled phones. This capability allows content providers to reach the enormous number of device models being introduced with the same source content.

WebSphere Transcoding Publisher can be deployed in a number of ways, providing increased flexibility. Besides the stand-alone proxy server, caching proxy, servlet and JavaBeans™ transcoders, you can use the reverse proxy deployment option. An ideal solution for devices that do not have a means for users to specify a proxy, this flexibility allows you to integrate WebSphere Transcoding Publisher with your existing network configuration. With these options, you can deploy WebSphere Transcoding Publisher where it will be most effective in your network infrastructure.

To simplify monitoring and management, you can store configuration information in a Lightweight Directory Access Protocol (LDAP) directory shared by multiple WebSphere Transcoding Publisher servers. This reduces the investment required to deploy the transcoding solution to multiple WebSphere Transcoding Publisher servers.

Customize presentation
WebSphere Transcoding Publisher helps make communication through the wireless Internet more targeted and convenient. Not only can you extend your Web content to pervasive devices, but you can customize the end-user experience so that the information is received effectively and in a user friendly fashion. The result is better interaction with customers, trading partners, suppliers and employees.

Using WebSphere Transcoding Publisher, you can customize content in several ways. With some custom Java™ programming, text clippers can be written to extract, or clip, specific content to be delivered to the device. For example, a cell phone user is able to retrieve a relevant portion—such as the daily stock price—from a corporate home page filled with other links and detailed information less essential to the specific transaction. Support is also available for an alternative approach to content selection—called annotation—based on annotating the original page with instructions to select and tailor content. The annotation transcoder responds to an XML-compliant annotation language that can either be added to the original document or maintained in a separate file.

WebSphere Transcoding Publisher can also transform XML content to various formats and markup languages through the dynamic application of XSLT stylesheets. The stylesheet management functions help facilitate business-to-business (B2B) information interchange.

WebSphere Transcoding Publisher includes a standard set of device and network profiles, containing configuration and capability information to support a wide variety of popular client devices and common network environments. When processing Web content, WebSphere Transcoding Publisher dynamically selects a network profile and a device profile to apply to the document.

The preference profiles define the characteristics of devices and networks. Individual preferences can indicate unique features, such as whether a device processes JavaScript or displays color images. Grouped together in profiles, the preferences define how data should be transcoded before it is delivered to the target device or network. With WebSphere Transcoding Publisher, adding support for new pervasive devices and stylesheets is a simple process through a graphical interface.

Designed to support developers and systems integrators, WebSphere Transcoding Publisher toolkit provides a rich set of application programming interfaces (APIs) to customize existing transformation engines and integrate new transcoders as part of its pluggable framework. For example, the IBM Machine Translation Transcoder enables WebSphere Transcoding Publisher to work with the WebSphere Translation Server to dynamically translate Web content into different languages. By using the two products together, HTML content can be translated into multiple languages in realtime and then transcoded to further extend the content to pervasive devices.

As your enterprise expands into new e-business markets, your ability to extend data and applications to the growing number of portable devices and pervasive computing environments becomes vitally important to reaching new customers and enhancing B2B relationships. WebSphere Transcoding Publisher propels your business to the second wave of the Internet — the wireless Internet — and helps ensure that your data and applications will reach customers and employees in tomorrow's environments.

For more information
To learn more about IBM WebSphere Transcoding Publisher, visit:

ibm.com/websphere/transcoding

IBM WebSphere Transcoding Publisher features at a glance

Feature	Benefit
Access to Web data and applications from pervasive devices, such as PDAs, Microsoft® Windows® CE devices, Internet-enabled phones and traditional voice-only phones	• Extends the reach of application content to new customers — regardless of client device type — creating new business opportunities • Expands the reach of self-service applications for products and services • Helps enable dynamic content sharing with trading partners and suppliers across disparate systems
Plug-and-play transcoders for standard text and image formats, including XML, HTML, HDML, WML, cHTML, 5i-Mode, VoiceXML, PalmOS HTML, GIF, JPEG and WBMP	• Provides convenient and virtually seamless access to Web content • Leverages existing IT assets (host data and Web application content) into new environments • Provides plug-and-play transforms
Easy customization of content view	• Helps you modify content for a wide selection of device types and matches display to user needs • Leverages text clippers, which can extract specific portions of the Web document to be displayed on the device for a more usable presentation and efficient delivery of information • Provides runtime support for annotation, a content selection approach which makes it possible to select and tailor source content through an XML-compliant annotation scripting language • Enables WebSphere Transcoding Publisher, through the Machine Translation Transcoder, to work with the WebSphere Translation Server to dynamically translate Web content into different languages
Rich, dynamic framework for transcoding that is extensible and standards-based	• Provides an open, flexible solution • Extends easily by adding new device or network profiles and content transforms in response to market needs • Provides capability to add custom transcoders, stylesheets, device profiles and annotators
Flexible implementation models, including IBM WebSphere Application Server servlet, forward proxy, reverse proxy and JavaBeans deployment	• Serves as a network proxy to enable existing host applications for wireless access or as a servlet running WebSphere Application Server; as a network proxy, works with caching products in your network
Easy-to-use developer toolkit with documentation and samples for building powerful solutions	• Facilitates customizing Web content presentation • Simplifies customization of existing transcoders or creation of new transcoders • Supports developers and systems integrators by providing sample programs and GUI-based tools

IBM WebSphere Transcoding Publisher features at a glance (continued)

Recommended hardware	
IBM AIX® on IBM RS/6000® and Sun Solaris™ operating environments	• 50MB available disk space • 1GB available memory • 333-MHz or higher processor
IBM AS/400® operating system	• AS/400e™ Server 170 with minimum processor Feature 2385, or higher model AS/400e or IBM @server iSeries • 512MB available memory
Microsoft Windows NT® and Windows 2000 operating systems	• 50MB available disk space • 512MB available memory • Intel® Pentium® II and 350-MHz or higher processor
Linux®	• 50MB available disk space • 512MB available memory • Intel Pentium II and 350-Mhz or higher processor

Software requirements	
IBM WebSphere Transcoding Publisher, Version 3.5 for Multiplatforms server operating systems	• IBM AIX, Version 4.3.2 or higher • Windows NT, Version 4.0 with IBM SP5 • Windows 2000 server • Sun Solaris operating environment, Version 7 • Red Hat Linux, Version 6.2 • SuSE, Version 6.4
IBM WebSphere Transcoding Publisher, Version 3.5 for iSeries server operating systems	• IBM OS/400®, Version 4.5 with latest fix package applied

Note: If running as a servlet, IBM WebSphere Application Server, Version 3.5 is required. To use centralized configuration data, Tivoli® SecureWay® Directory, Version 3.2 must be installed.

Client applications	• HTML-capable browsers, such as Microsoft Pocket Internet Explorer, Microsoft Internet Explorer and Netscape Communicator • Microbrowsers, such as Phone.com Up.Browser and Nokia WAP client • Devices with a standard HTTP browser

Software supported	• Legacy integration
	  – IBM WebSphere Host Publisher
	• Caching and load balancing
	  – IBM WebSphere Edge Server
	• Web serving
	  – IBM WebSphere Application Server, Version 3.5
	• e-business accessibility, including voice interface
	  – IBM WebSphere Everyplace™ Access
	• Pervasive computing
	  – IBM WebSphere Transcoding Publisher is a key component of IBM WebSphere Everyplace Suite
	• IBM WebSphere Voice Server
	• IBM WebSphere DirectTalk® Server
	• IBM WebSphere Translation Server

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