Extends information access across diverse business environments, quickly and seamlessly

IBM WebSphere Transcoding Publisher

Highlights

Enables access to Web data and applications from personal digital assistants, WinCE devices and WAP phones

Provides a rich, dynamic framework and standards-based transcoding programs

Allows transformations for standard text and image formats, including HTML, WML and XML, GIF and JPEG

Offers flexible implementation models, including WebSphere Application Server servlet, proxy and JavaBeans deployment

Integrates with Host Publisher to extend host applications to pervasive devices

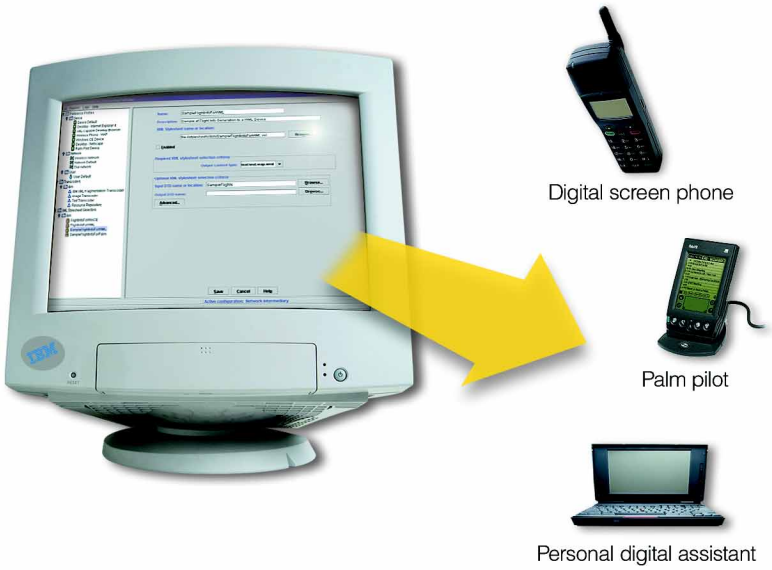
Interoperates with industry-leading caching, fault tolerance and workload-balancing products

Adapts Web content for emerging devices using content clipping and content fragmentation

Easy customization to new devices and new data transformations

Includes an easy-to-use developer toolkit with documentation and samples for building powerful solutions

As e-business moves from the desktop to the new breed of handheld information appliances, delivering greater access to your enterprise assets is vital to your competitiveness. IBM WebSphere™ Transcoding Publisher (Transcoding Publisher) offers 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.



Transcoding Publisher offers access to handheld information devices.

e-business

A flexible, standards-based solution for dynamic data conversions to new and emerging environments

With Transcoding Publisher, you can quickly and cost-effectively provide seamless access to mobile employees, customers, business partners and resellers across the Internet, extranets and intranets. Transcoding Publisher dynamically filters, adapts or reformats your Web-based data*, minimizing the need to generate and maintain multiple versions of Web content or applications to support different target devices and environments.

Extend information access across your enterprise

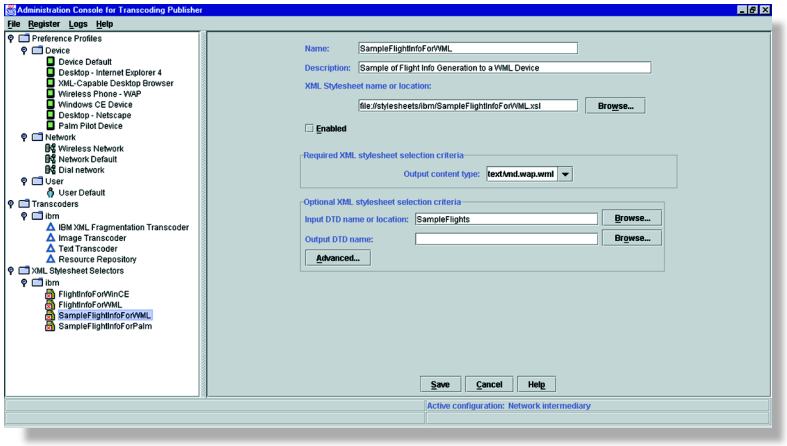
Transcoding Publisher consists of several interrelated components that provide an open, extendable platform for adapting your data to the pervasive environment. The primary components include:

- A pluggable framework for managing the flow of HTTP requests and responses through Transcoding Publisher
- A standard set of transformation engines for transforming Web-based content
- A set of configurable device profiles for content modification
- A developer's toolkit consisting of documentation and samples for customizing new and existing transformation engines

Through server-side transformations, you can use Transcoding Publisher as a network proxy to Web-enable existing host applications or as a servlet running in IBM WebSphere Application Server to build, manage and deploy powerful, portable Web-based applications suitable for today's pervasive devices. Working with IBM Host Publisher, Transcoding Publisher offers you the flexibility to extend existing host-based applications, such as IBM CICS®, TN3270 and TN5250. As a network proxy, it works with caching products in your network, which can improve overall performance and efficiency.

Transform host data for pervasive environments

Using Transcoding Publisher together with Host Publisher, you can put your enterprise data to work for you — when and where you need it — helping to reduce costs, increase productivity and improve service to your customers. Its pluggable framework and transformation engines, called transcoders, enable you to modify your Web-based information* for different users or devices without redesigning your enterprise systems. The Transcoding Publisher framework hosts transcoders written in Java™, C and C++ languages, creating a rich, dynamic environment for



Transcoding Publisher extends existing and Web data to portable data devices.

sequencing transformations, monitoring requests and generating responses. The framework provides common services to transcoders that are plugged into the system and mechanisms for manipulating the data, such as the ability to evaluate preference information and respond appropriately to requests received from different devices or network types. Because of its pluggable design, you can easily extend the transcoding server's capability to support new data formats or meet special transcoding needs.

For added power, Transcoding Publisher fully supports popular caching products, including IBM Web Traffic Express and National Science Foundation Squid Cache Proxy. When used with a cache server, Transcoding Publisher provides cache control and retrieval mechanisms to help reduce server time for compute-intensive transcoding operations and help improve response time for retrieving transcoded documents stored in the cache. Transcoding Publisher can scale to support large environments when used with workload-balancing products, such as IBM Network Dispatcher.

Tailor Web content to emerging devices

With the rapid growth in the number of handheld information appliances, your ability to tailor content to small display screens becomes increasingly important. Transcoding Publisher offers a broad selection of transcoders that modify your Web data and images* for display on portable client devices.

With its standards-based, extensible structure, Transcoding Publisher enables you to selectively apply transcoders known to your system and provides a mechanism for adding custom transcoders as well. Transcoders can also be included within Web applications as embeddable JavaBeans™ modules that can run independently of the Transcoding Publisher framework, enabling you to adapt applications to pervasive environments, quickly and easily. With Transcoding Publisher you can provide access to multiple users working on different devices by performing a variety of text and image conversions, including:

- Simplifying HTML document customizations
- Converting HTML to Wireless Markup Language (WML)
- Converting Extensible Markup Language (XML) documents to renderable formats, including WML and Handheld Markup Language (HDML) documents
- Modifying image size, color depth, resolution and format of graphic images

Transcoding Publisher provides patent-pending technology that generates a WML document from an incoming HTML document for use with wireless phones, using Wireless Application Protocol (WAP). Transcoding Publisher hosts customized transcoders, called text clippers, that can extract specific portions of the Web document to be displayed on the device. Before downloading to the device, a fragmentation transcoder subdivides the content into small sections — called WML decks — enabling complex Web content to match the deck-size constraints of WAP-based phones, which frees content providers from many of the problems related to managing different constraints for different phones.

Transcoding Publisher can improve information delivery, in wired or wireless environments, especially to lower speed networks. Transcoding Publisher can determine which transformations to perform based on the user's access point.

Personalizing preferences and profiles

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, 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 Transcoding Publisher, adding support for new pervasive devices and style sheets is as simple as creating profiles using graphical templates. You can build customized preference profiles to develop a custom transcoder or to create profiles for devices not currently supported by Transcoding Publisher by using the profile wizard included with the toolkit.

Developing custom transformation solutions

Designed to support developers and systems integrators, Transcoding Publisher toolkit provides a rich set of application programming interfaces (APIs) for customizing existing transformation engines, creating new device profiles and integrating new transcoders into its pluggable framework.

To help you develop new transcoders, style sheets and preference profiles, the toolkit contains a rich set of documented samples and deployment tools for building custom framework extensions. Transcoding Publishers samples include:

- Sample transcoders
- Sample programs, which use JavaBeans transcoders
- Clippers programs for HTML-to-WML conversions
- XML style sheets

Extend the reach of your data resources

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 environments becomes vitally important to reaching new customers and enhancing business-to-business relationships. Transcoding Publisher can help you leverage your enterprise assets so that your business data is tailored to users and widely accessible.

For more information

To learn more about IBM WebSphere Transcoding Publisher, visit: *www.ibm.com/software/websphere/transcoding*

IBM WebSphere Transcoding Publisher at a glance

Hardware requirements	The following are requirements for IBM AIX® and Sun Solaris™ operating environments: • 166MHz or higher processor • 200MB of available disk space • 256MB of memory The following are requirements for Linux®, Microsoft® Windows NT® and Windows® 2000 operating systems: • Intel®-compatible personal computer • 200MB of available disk space • Intel Pentium® 11/266Mhz or higher processor • 256MB of memory
Software requirements	Server operating systems: • AIX, Version 4.3.2 or higher (National language versions are supported) • Windows NT 4.0 with service pack 5 (National language versions are supported) • Windows 2000 Server • Sun Solaris RISC (If running as a proxy, Solaris, Version 7 or higher) • Red Hat Linux V6.1
Note: If running as a servlet on any platform above, WebSphere Application Server 2.03	
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
Software supported	• Host integration – Host Publisher, Version 2.1 • Load balancing – Network Dispatcher, Version 2.1 • Caching – Web Traffic Express, Version1.3.6 and Squid Cache Proxy, 2.2.1 and 2.2.4

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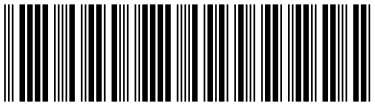

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