



Enterprise RSS

A Web Services Framework for Creating and Managing RSS in the Enterprise

A Technical Brief
Published March 2005

Executive Summary

RSS is emerging in a variety of ways that provide alternative and productive methods for many information purposes. The array of possibilities for RSS feeds represents an opportunity to extend the reach of information resources; for public syndication as well as internal corporate knowledge syndication.

MyST Enterprise RSS services are designed to provide integration connectors and business logic that map existing corporate content and information sources to RSS feeds.

This technical brief provides an introduction to MyST Enterprise RSS services and technologies.

Introduction

The MyST Platform is suitable for many content-oriented solutions, but an area that it excels in is integration with information sources to provide canonical XML formats. The platform completes this capability with its robust XSLT presentation layer, making it possible to transform arbitrary sources of content into syndication formats such as RSS and Atom.

MyST Technology Partners uses the MyST Platform to create, manage, and host RSS for enterprise solutions such as the transformation of press releases into RSS feeds. Integration with enterprise information sources is achieved through various components and automation tools designed specifically for content acquisition objectives.

There are six essential technologies used to provide enterprise RSS services.

1. Aggregation Engine
2. MyST-X Scripting Engine
3. MyST Persistence Service
4. MySmartChannels™
5. MyST XSL Transformation Service
6. MyST Click-Director

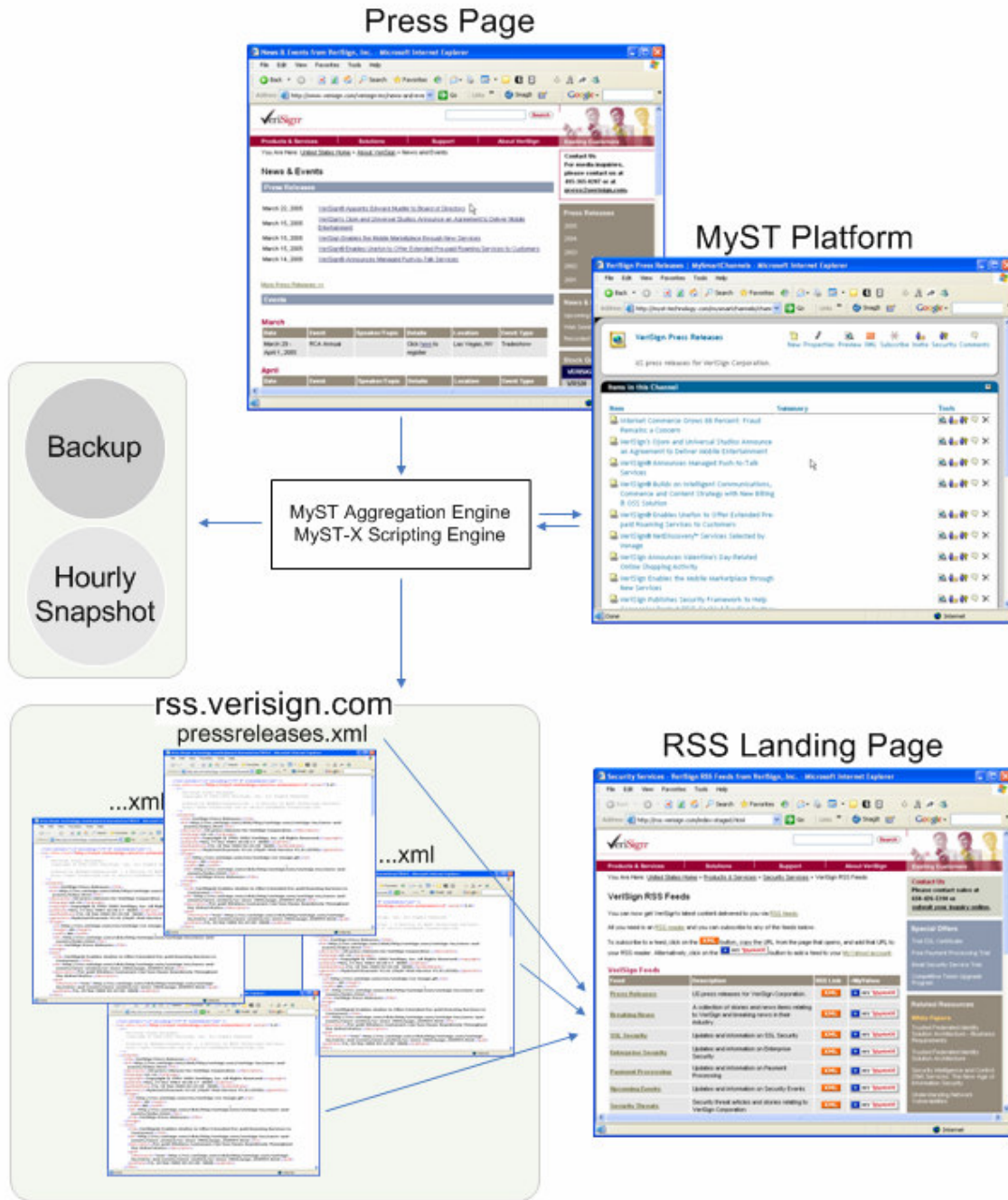
Each of these technology components provides specific support for building end-to-end RSS services. By designing these components as a federation of loosely coupled services and built on an abstract underlying platform (MyST), we have been able to rapidly offer solutions for a (seemingly) wide variety of business problems that intersect with RSS requirements.

Information Flow

The process used to create RSS information from existing information sources varies depending on the business requirements. A typical process involves the mapping of items such as press releases from a press room on the Web site to an RSS feed on a corporate sub-domain.

In this example the MyST-X Scripting Engine maps content from the press page and stores it in the MyST platform. The scripting engine then transforms the MyST-based content items into RSS feeds and deploys them to a server where the RSS content can be presented in a landing page and also served to end users.

The update process typically occurs once nightly but shorter update cycles are possible. The process also provides a daily backup service and an hourly snapshot.



MyST Aggregation Engine

The MyST Aggregation Engine provides a unified method for transforming HTML (even poorly written HTML) and other information sources into XML. Typically, the aggregation engine is used to leverage HTML information without requiring a client to develop extensive API gateways. This is commonly believed to be synonymous with “screen scraping”, but the aggregation engine is more advanced; it transforms all HTML to XML, thus enabling us to leverage XPath to more accurately capture the client data.

Integration with Popular Content Management Systems

To harden the ability to leverage HTML as a reliable source of content for RSS objectives, MyST Technology Partners has worked closely with customers such as Intel Corporation, to define specific tagging mechanisms that can be easily integrated into popular content management systems.

MyST Content Tagging provides a consistent markup model for generated HTML pages that identifies information for the RSS mapping process. The idea essentially mimics the XML concept of marking up the meaning of content, whereas HTML marks up the presentation of content.

It is important to note that these are guidelines and not absolute rules. Content not adhering to these guidelines can still be mapped to RSS but may require additional setup and testing effort. However, following these tagging guidelines offers several benefits. Specifically, the process of mapping content to RSS becomes

1. less costly because we do not need to support a large number of recognition mechanisms;
2. more reliable for essentially the same reason; and
3. less brittle because web teams can change page layouts and structure without breaking the mapping process, as long as the tagging remains intact.

MyST-X Scripting Engine

MyST-X is a declarative XML automation scripting environment for the MyST platform. When a repeatable process is required, MyST-X is typically employed. With its template-based architecture, it provides a powerful mechanism for building application processes. As examples, MyST-X drives the automatic creation of blogsite applications for Blogsite.com. It is used for competitive intelligence gathering and reporting services. And relevant to this technical brief, MyST-X drives the integration mapping and harvesting processes for our enterprise RSS customers.

MyST-X can be run on servers or from clients and is ideal as a development tool in addition to production automation tasks. MyST-X is also employed in the professional services phases of our RSS engagements to automate the creation of persistence channels, apply permissions, and even build XSL transformations.

MyST-X Overview

- An XML-based scripting language
- Proprietary scripting elements
- Standard XSL processor
- A script processing engine

- An application framework infrastructure

MyST-X Capabilities

- Execute any MyST business logic plug-in command
- Execute selected MyST core service commands
- Perform arbitrary XSL transformation
- Dynamically synthesize and execute MyST-X script
- Perform complex variable expression evaluation
- Save and restore processing state between jobs
- Various utility operations (e.g., send e-mails, update directories, expand file templates, etc.)

MyST Persistence Service

We designed MyST (the web services platform) around two basic concepts: agility and security. The platform defines a highly abstract model for dealing with information objects. This model includes a pervasive security model that permits granular permissions control over every aspect of the platform. It is useful to think of the objects at this level as elemental objects from which more specific (i.e., less abstract) knowledge solutions are built. To facilitate the creation of such solutions, the platform supports what we call *business logic plug-ins*.

A business logic plug-in is a piece of software that "plugs in" to the MyST platform to add native support for the business logic needed for a specific knowledge solution. The platform can simultaneously support any number of plug-ins, giving it a chameleon like quality; the platform can easily look like whatever it needs to look like to most effectively address a specific knowledge solution. Our [MySmartChannels Blogsite™](#) is a concrete example of how a plug-in transforms the MyST platform into something more specific.

MySmartChannels™

MySmartChannels refines MyST's abstract object model into one organized around the idea of channels of information. Channels are created around specific subject matter areas and contain any number of information items about that subject. Channels themselves are organized into higher-level containers known as spaces. To this, MySmartChannels adds the ability to transform (using industry standard XML and XSL technologies) channel content into not only HTML web pages, but virtually any imaginable format including XML, RSS, RDF, Microsoft Office smart tags, OPML, SharePoint WebParts, topic maps, even formats that have not yet been invented. The MySmartChannels channel metaphor embraces the idea of personal weblog publishing but extends the idea to weblog applications that are composed of many channels interacting as an application in a

secure environment. Thus, MySmartChannels can be seen as both a concrete solution built on MyST and also as a platform for building specific weblog applications.

MySmartChannels provides the middleware necessary to manage content for static and dynamic purposes. For this reason, we are able to manage and host secure [or public] RSS feeds. But most important, MySmartChannels provides a permissions and security context at the item-level, making it possible for each user's security context to control the items they see in their feeds.

MyST XSL Transformation Service

This service addresses all presentation requirements including HTML and XML formats. The MyST Persistence Service delivers information in a canonical XML format known as MyST-ML. XSLT is then used in conjunction with MyST-ML to transform information into any desired format. This approach makes it possible to support dozens of syndication formats with simple XSL transformations that adhere to whatever security contexts are in place at the time of the information request.

The following examples provide a sense of the agility in the MyST transformation layer. Each document is based on the same channel content, but transformed for slightly different purposes.

- *Example HTML Document*
<http://myst-technology.com/mysmartchannels/public/blog/11678>
- *Example MyST-ML Document*
<http://myst-technology.com/mysmartchannels/public/object/11678?model=none>
- *Example RSS 2.0 Document*
<http://myst-technology.com/mysmartchannels/public/rss/11678>
- *Example Atom Document*
<http://myst-technology.com/mysmartchannels/public/atom/11678>

MyST Click Director

Often, it is desirable to track usage patterns of RSS (or other) content feeds. MyST Click Director is a web service that collects both click-through and impression statistics. The MyST presentation layer can instrument RSS feeds—or any other presentation format—such that Click Director tracks all link and image references. Link references provide click-through statistics; image references provide impression statistics.

The mapping of instrumented URLs to actual URLs is arbitrary and easily controlled through Click Director configuration settings. Further, Click Director supports a business logic plug-in framework that allows custom tracking logic to be inserted into the process.

Professional Services

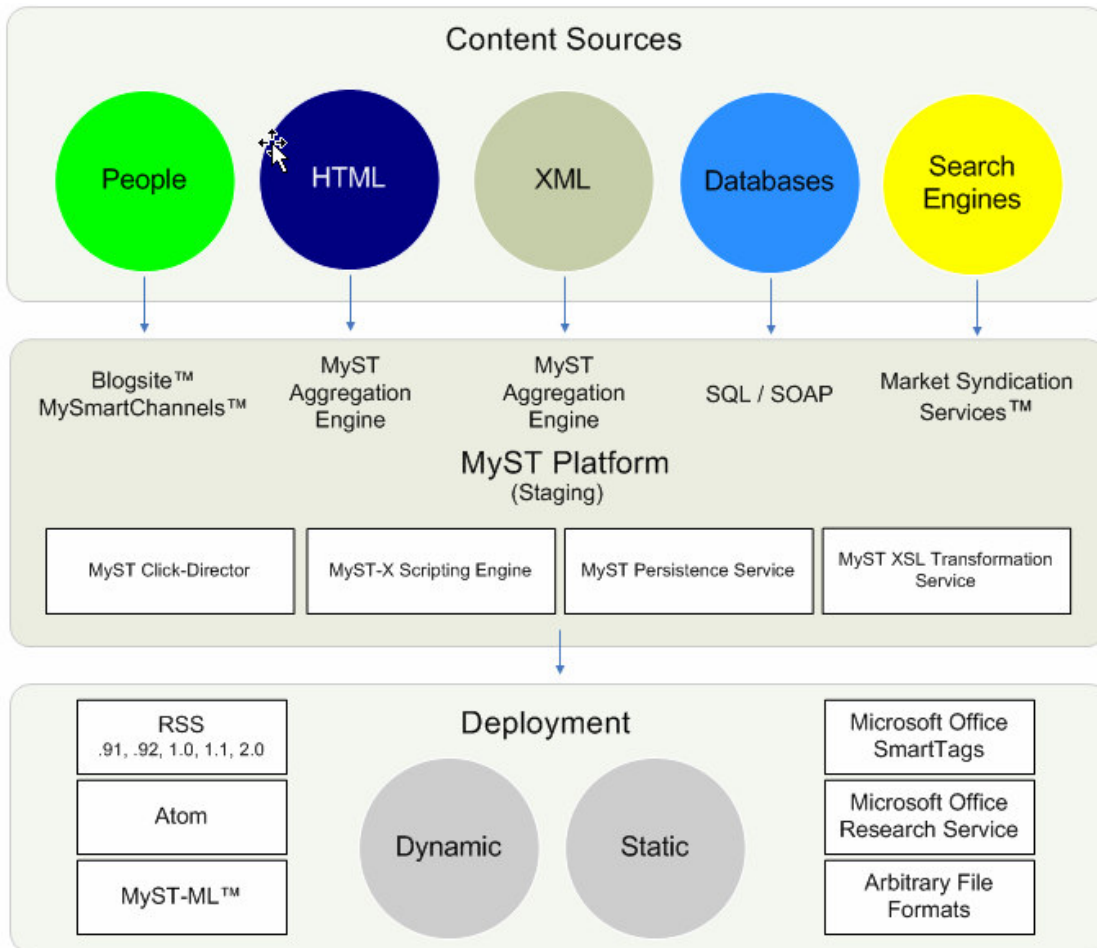
Although MyST Technology Partners is a small firm, we have strategic relationships with a number of professional services firms experienced in both Java and .NET integrations.

Success Patterns

We've developed a number of RSS success patterns that leverage the experience we've gained providing our largest customers with RSS services. These patterns are based on specific business requirements that have been captured in reusable MyST-X script. This allows us to rapidly create and deploy RSS solutions based on best practices and repeatable processes.

Enterprise RSS Solution and Technology Roadmap

With our wide array of services and complimentary engines, the MyST Platform is surrounded with capabilities that allow us to tackle RSS challenges. As enterprise use of RSS continues to grow, MyST Technology Partners is in an ideal technical position to meet the demands and requirements that are not fully understood at this time.



To learn more about MyST RSS Enterprise Services and the MyST Web Services platform, to obtain a free MyST user account, or to explore how your organization might benefit from these technologies, visit the MyST Technology Partners Web site at <http://myst-technology.com> or send e-mail to info@myst-technology.com.

Forward-looking Statements

This white paper contains “forward-looking statements.” All statements that are not historical are forward-looking. Forward-looking statements represent reasonable beliefs of the authors at the time of publication of this white paper but do not constitute an obligation of any kind on the part of the authors or any other party. The authors are under no obligation to alter any forward-looking statements or notify any parties under any circumstances.