Keeping Ahead of the Competition

WestNet streamlines production of blended training materials.

By Jeff Katzman

TO REMAIN COMPETITIVE in the workplace training and development field, WestNet Learning consistently reassesses its information systems. In 2005, WestNet streamlined its production process to develop and publish learning products by creating a single source of content.

"Our ultimate objective was to improve the quality and speed-to-market for all our learning products and to leverage our intellectual property to generate customized products rapidly," says Joe Scullion, president and CEO of WestNet Learning. "By developing a single-source content strategy, we were confident that we would achieve these objectives while continuing to lower the costs associated with production and maintenance."

There were several factors that drove WestNet to initiate this streamlining project. First, there was a sense of urgency because the current learning content management system (LCMS) was no longer meeting the company's long-term goals. WestNet needed to either improve the LCMS or transition to another system. In the end, the company decided to adopt a solution consistent with its long-term goals. Second, WestNet wanted to leverage its object-oriented courseware from SCORM 1.2 to SCORM 2004 as quickly as possible.

A third factor that influenced WestNet's decision surfaced when the company assessed its current development process and its use of global subject matter experts (SME) . Under the old format, WestNet utilized between six and eight subject matter experts for course content development. WestNet also developed courseware sequentially. The development process started with the textbook. Once completed, WestNet cut, pasted, and reformatted the content into the instructor guide. For e-learning, the content was again copied and reformatted using the company's LCMS. Author and delivery assessment was developed using yet another team, process, and system. The bottom line is that WestNet maintained multiple systems for book publishing, e-learning, and proprietary author and publishing assessment solutions.

With WestNet using remote experts and the cut-and-paste approach to develop content, the teams spent considerable time and money to rework content for consistency in structure, substance, and quality. Furthermore, when content had to be updated, one small change created a set of time-consuming tasks. The process delivered products that were developed in isolation of the ultimate blended learning vision.

Granular XML content

To achieve a single-source strategy for the development of its multiple training products, WestNet recognized that the content had to be stored in a granular and structured, yet flexible way. For example, a procedure initially authored for a web-based course had to be stored as a discrete element apart from the course that referenced it. In this way, the procedure element can also be referenced in other documents such as a technical manual, instructor guide, or a performance support system.

The use of extensible markup language (XML) to develop learning objects versus course-based formats was critical for the development of WestNet's e-learning courseware. Transforming and storing content in XML and using the extensible style sheet language (XSL) allows the same piece of content to be separated from its presentation and translated into other formats.

For example, XSL renders XML content to HTML while XSL-FO (formatting objects) generates printed formats such as a PDF. So, an installation procedure has a different XSL technology applied when publishing as a printed instructor guide versus a SCORM-compliant web course.

"Adopting a single-source XML strategy not only eliminates redundant development but also lets us rapidly design

and assemble customized course curriculums and deliver on-demand training in the format best suited to an individual learner's requirements," Scullion says.

Beyond the traditional LCMS

During a six-month period in 2005, WestNet evaluated 30 different LCMS solutions. "From an e-learning standpoint, one of challenges for providers is that they need the LCMS to do other things besides provide e-learning," says Scullion. "To us, it was important to find a LCMS system that does everything we need in e-learning, but also allows for a learning organization or a corporate university to develop outputs in other formats."

LCMSs were introduced in the late 1990s in response to the tech bubble that predicted classroom-based instruction would be supplanted by web-based training. The prospect that e-learning could reduce travel and provide personalized training fueled the trend. LCMSs were introduced to streamline production of web-based courseware. By enabling learning object reuse and managed workflows, LCMSs dramatically drove down the costs of courseware creation.

LCMS would have secured their place in the enterprise if it were not for the fact that web-based training was not the all-encompassing solution. The industry's expectations for web-based training were dashed following a succession of failed initiatives. This led to a market reaction and the new watch word "blended training delivery"—the appropriate mix of classroom instruction, self-paced e-learning, certification, simulations, media rich animations, knowledge sharing, and performance support.

The move to blended learning has created two fundamental problems for the current breed of LCMS products. First, the production needed to support all the delivery modalities—web-based training, classroom training, performance support, simulations, and help systems. Organizations must maintain redundant teams, tools, and processes to re-create the same content for multiple training modalities. This is exactly the challenge that WestNet faced. Second, considerable time and money are needed to establish content consistency. While a traditional LCMS makes sense in a world where everything is about web-courses, it doesn't make sense in the world of blended training and delivery because it can compound the problem of redundant content production.

According to WestNet, 50 percent of its customers who ask for course material in one format typically want it in an alternative format as well. Customers who initially ask for an e-learning course return to request the same content as a study guide. Alternatively, other customers who initially request printed guides eventually request an e-learning course because some people learn better through visual instruction.

According to Jeff Katzman, vice president of operations at Xyleme, a company looking to purchase a LCMS should consider three factors in the world of blended training:

- Does the solution decrease the costs of production for blended training delivery?
- Does the solution provide a higher quality customer experience where each access point offers consistent and high quality content?
- Does the solution provide a means to introduce new revenue-generating content services?

During this evaluation, WestNet chose Xyleme's learning solution because it supported SCORM 2004 and was the only solution that supported multiple modality deliveries. WestNet focused its initial implementation strategy on delivering web-based courses with plans to expand to other modalities in the second phase. Xyleme converted its existing e-learning content so that it could be maintained with Xyleme Studio; and integrated with WestNet's existing LMS, IntraLearn. The solution also allowed WestNet to run SCORM 2004 courses on IntraLearn's SCORM 1.2 LMS. This phase of the project took approximately two months to complete and was implemented in September 2005.

"From an implementation perspective, WestNet was faced with the question of how to integrate the content into Xyleme and how to do so in a manner that stayed within our budget and mirrored the current product that we were delivering to our customers," says Scullion.

Xyleme provided the content migration services to convert WestNet's existing content into XML and translated the proprietary navigational rules to a SCORM 2004 compliant format. The converted courseware included internally-developed content as well as large amounts of external content such as Flash files, e-book content, and external assessments.

Future training modalities

WestNet plans to develop new processes and templates to create an instructional design model for developing media-rich web courses, instructor and student guides, classroom slide decks, syllabi, and assessments. To improve the process, WestNet will use work flow to assign and coordinate development and production tasks. To improve the consistency and quality of the material received from the experts, WestNet is developing templates to provide the SMEs with an easy-to-use structured authoring environment. All of this functionality is provided in the new Xyleme system.

When an instructional designer assigns a task to an expert, an automated email notification will be sent to the SME with a link that launches a forms template with the appropriate document. The expert inputs content directly into the template and is not concerned about format, font, layout, or any other production items. The template requires the SME to put the correct content in the right places and when completed, the document moves back to the instructional designer.

As WestNet develops specific courses, the expert is actually developing and managing information that can be reused to assemble other courses. In this way, instructional designers and technical writers can rapidly assemble the textbooks, instructor and student guides, assessments, e-learning, and labs by searching for reusable objects and simply dragging them into the target publications.

Improved customer experience

From the same base of XML content, WestNet will be able to utilize its textbooks, instructor and student guides, assessments, and e-learning to achieve significant benefits and cost savings.

By establishing a single source of content, standards for content development and the use of forms as templates, WestNet expects significant improvement in training consistency and quality, which ultimately affects the customer experience. For example, the Xyleme SCORM 2004 Runtime Engine will integrate the assessment and e-learning courseware. Today, the systems are separate. A user takes an assessment in one system that prescribes the e-learning, then must log on to the e-learning system to launch the training, which creates a disjointed user experience.

With the use of work flow and notifications, WestNet will be able to streamline production, eliminate redundant content for different training mediums, improve productivity, and reduce time-to-market. By adopting an XML object strategy, WestNet can create higher quality learning products with less staff at a lower cost.

In contrast to the old method, WestNet expects the new system to cut development time and costs by one-third. The tools and methodologies also provide a migratory path to introduce new products and services that leverage their high value content. The Xyleme solution provides a single integrated system that meets all these requirements.

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