**Applying traditional process improvements to virtual world**

**Opportunity:** Can continuous process improvement techniques be used in a production environment where products can’t be held and touched? How do you identify defects in a production process that creates Web sites serving millions of users daily?

That’s what Wes Williams wondered. Williams, a 2007 graduate of the University of Tennessee’s Professional MBA program, is director of SN Digital Online Production at Scripps Networks in Knoxville. SN Digital produces Web sites for Scripps’ television networks, including Food Network, HGTV and DIY Network.

SN Digital did not have a process for identifying or tracking broken pages and links. Instead, the production team relied on catching problems themselves or hearing about glitches from its customer service department.

**Challenge:** Large media Web sites are complex operations involving different publishing systems and dozens of staff members making manual and automated updates to text, images and video. A single wrong character in the programming code can cause a Web page to fail. Although this happens on a small percentage of pages, problems can become costly. If a Web link to popular content breaks, this “product defect” could mean dissatisfied customers who can’t access the content, lost advertising impressions and the potential forfeiture of advertising dollars. These defects may also cause users to leave the site.

**Concept:** Williams aimed to apply continuous process improvement principles to the electronic assembly line that produces Web pages. “My Professional MBA classes at UT showed me it should be possible, but only if you know what to measure, can actually measure it, and can analyze what you’ve measured to take action,” he said.

**Solution:** Changes to Scripps Networks’ Web sites had made it possible to measure how many times users encountered broken Web pages and determine precisely where users had clicked on broken links. This information was being saved, but the staff was unaware, because the information was buried in a huge volume of data.

Williams set up two layers of reporting for when broken pages occur.

First, an automated alert notifies support staff when the number of errors per hour crosses a certain threshold. This is similar to an electronic canary in the coal mine: problems are discovered quickly rather than lingering until staff happen across it or users complain.

The second report layer is a morning summary of broken pages recorded the previous day. That data helps prioritize issues that need attention, Williams says.

These reports also give staff a way to track the defect rate and focus on continuous improvement. “The SN Digital team now is identifying the root causes so the pages can prevented from breaking again,” Williams said.

“By finding the right data and understanding it, we’re able to improve our product quality, preserve advertising revenue and keep our users happy,” Williams said.

Williams received a Scripps Networks Interactive Chairman’s Award in November 2009 for applying Professional MBA lessons to the real — or, in this case, virtual — world.

Case Study is provided by the University of Tennessee College of Business Administration. For more information, contact Cindy Raines at craines1@utk.edu.