

# A TRUE TEST OF MEASUREMENT

*At the University of Minnesota, scanning technology speeds accurate scoring on final exams, and powers education programs throughout the state.*



Don't be fooled by the numbers: In one year, nearly one million answer forms are processed for Minnesota schools, 200,000 answer forms for the University of Minnesota classes, and 225,000 faculty evaluation forms. The University Office of Measurement Services (OMS) is more than just a volume shop for scanning and scoring.

OMS is an educational resource with a mission. Armed with industrial-strength scanning technology from Pearson NCS, the OMS is dedicated to improving education through its expertise in performance assessment and survey opinion gathering.

New program director, Thomas Dohm, Ph.D., plans an aggressive approach for sharing that expertise. He intends on expanding beyond undergraduate testing and student evaluation of faculty by ensuring outstanding customer service.

"Within the University, we need to treat our customers as clients rather than a captive audience," Dohm says.

The Office of Measurement Services supplies 204 academic departments with scannable answer forms used in survey courses for roughly 40,000 students. During final exam week, the office scans and edits 20,000 response forms for 200 classes and returns the results to faculty within 24 hours, on paper and/or electronically.

Beyond testing, OMS conducts scanning and consulting on other university or department evaluation projects, such as the College of Veterinary Medicine's Biocontainment Study, Boyton Health Service's Patient Satisfaction Questionnaire, and the Freshman Orientation Survey, to name just a few.

The University of Minnesota also is the forerunner for curriculum integration, an effort to enrich curriculum by offering more courses in international settings while maintaining high quality standards. By 2005, the University wants half of all incoming freshmen to have studied abroad by the time they graduate. The Office of Measurement Services is evaluating the progress and success of the University's curriculum integration efforts. Dohm can foresee a time when this major project enables OMS to lend its knowledge and expertise to other Big Ten universities addressing the same issues.

## *A Full-Solution System*

The Office of Measurement Services' ability to serve a growing clientele revolves around a full-solution system from Pearson NCS Data Management. A 5000i<sup>®</sup> image system serves as the office workhorse, scanning response forms at a rate of 120 pages per minute.

"We couldn't exist on a slow scanner," says Dohm. "Speed and accuracy are paramount."

Image ScanTools™ software automates answer form processing and converts responses to usable information. It determines how the data on standard and customized scannable forms are read, edited, and scored. The software also programs the scoring key, ensuring that students get an accurate score.

Although the 5000i system is capable of capturing handwritten data, optical character recognition and bar codes, the Office of Measurement Services focuses on optical mark recognition (OMR) and imaging functionality. With OMR, the scanner looks for bubbles that are filled-in on the answer form. Thanks to Image ScanTools software, an image of the form can be stored and retrieved electronically.

OMS uses Design Expert™ Software to design its own customized scannable forms for specialized projects. For large projects, they transmit the form design to Pearson NCS for quick turnaround precision printing.

“Pearson NCS provides us with the tools for our business,” Dohm explains. “They share our interest in improving the educational system through quality assessment and service, so it makes a natural partnership.”

### ***An Expanding Role – Minnesota Outreach***

Dohm took the helm of Office of Measurement Services in November 2002, and quickly devised a new business model for it. Although OMS has always been self-supporting, Dohm strives to do more to meet educational needs by emphasizing customer service, efficiency and reasonable rates.

“Pearson NCS provides us with the tools for our business. They share our interest in improving the educational system through quality assessment and service, so it makes a natural partnership.”

***Office of Measurement Service and  
MN Statewide Testing Program***

***~ Thomas Dohm, Ph.D  
www.ucs.umn.edu/oms***

Process improvement teams have eliminated waste and found new, more efficient ways to work. With the assistance of Pearson NCS scanners and forms, the staff can now handle more work at little additional cost.

As part of the University’s outreach, Dohm doubles as the program director of the Minnesota Statewide Testing Program (MSTP), a non-profit program that provides standardized testing materials, scoring, and assistance at an accessible price to all schools in the state of Minnesota.

Utilizing Pearson NCS scanners and forms, the Office of Measurement Services scans, scores and reports on achievement tests, aptitude tests and career interest inventories for any K-12 Minnesota school in addition to any home school. OMS currently serves over 2,000 public, private and charter schools, and roughly 2,000 home schools. The office uses its volume to offer discounts on a broad menu of standardized tests and answer forms.

### ***The Technology Behind Quality***

In addition to managing volume, the Pearson NCS scanning system is vital to quality control. The office increasingly relies on technology and strives to eliminate human error in manual processes.

“We built quality control into our processes,” Dohm says. “Some are technology-driven, some are people-driven. We use Pearson NCS equipment to the greatest extent we can. Through our experience with Pearson NCS, we have learned to trust their technology.”

The editing software and imaging capability work together to safeguard the integrity of test results. Image ScanTools software selects answer forms with an unclear response, such as two filled-in bubbles on a question with only one right answer. A staff member inspects the selected image on-screen to determine the result. When a student challenges a score, imaging can offer visual proof whether or not the answer sheet was altered after being processed.

The mutual interest in improving education along with the expertise in assessment creates a good team for the Office of Measurement Services and Pearson NCS. This case is a true test of measurement for Pearson NCS technology. Call us today at 800-447-3269 to learn more.

Pearson NCS' engineering and production processes for data collection systems and forms are ISO 9001 certified.



Pearson NCS Data Management  
5601 Green Valley Drive  
Bloomington, MN 55437

Phone: 952-681-3000  
Toll-free: 800-447-3269  
Fax: 952-681-3674

All non-U.S. inquiries  
Phone: 651-683-6294  
Fax: 651-683-6301

www.PearsonNCS.com  
info-ncs@pearson.com