Price Quotation for the Nevada Department of Education
Online Testing Pilot for the High School Proficiency Exam (HSPE)
Pearson Educational Measurement

OVERVIEW

In response to the Nevada Department of Education's (NDE) need for faster, more reliable turnaround of test results for seniors retaking the High School Proficiency Exam (HSPE), Pearson Educational Measurement (PEM), a business unit of NCS Pearson, Inc., is offering to conduct a pilot program during the 2006-2007 school year to demonstrate the advantages that online administration of the HSPE can provide to the State of Nevada.

PEM will implement a custom solution for Nevada using our PEMSolutions Assessment Network and eMeasurement™ Services online testing system. eMeasurement Services is the industry's most widely-adopted online testing platform for statewide, high-stakes student assessment, providing the following benefits to testing programs in more than 10 states:

- Faster turnaround of individual test results
- Greater flexibility and on-demand testing for retesters
- Sophisticated, end-to-end security and encryption built in from the ground up to prevent cheating and provide for greater overall test security
- A robust, scalable system architecture with multiple measures built in to provide for a smooth, reliable testing experience
- Reduced administrative overhead for teachers and test administrators
- Minimal local IT support and infrastructure needed to install and maintain

SCOPE OF WORK

The pilot program we propose for Nevada includes the following:

1. **An Experienced Program Team** assigned to the NDE to see that your needs, priorities, requirements and schedules are understood, documented and fulfilled.
2. **Setup and Implementation** of a custom Nevada online testing website tailored to NDE preferences, including custom score reports.
3. **Test Form Conversion** to adapt the HSPE retest forms for online delivery during each retest administration in the 2006-2007 school year.
4. **Electronic Practice Assessment Tests (ePAT's)** using the HSPE released forms for Reading and Mathematics. These will be provided in two releases – a non-scored version in Spring 2006 and a new version that provides raw score information in September 2006.
5. **Comprehensive Training** for high school test administrators and IT staff.
6. **Technical Support** through our Customer Service Call Center and Level 2 technical support organizations.
7. **Online Test Delivery, Scoring and Reporting** of individual assessments, with 24-hour turnaround on individual results and classroom or school-level rosters
8. **Integration with your Current Reporting Processes** through a data extract file provided to the NDE and its existing assessment contractor.
9. **Comparability Analysis** of item and test performance for paper versus online administration modes.

These services are described more fully on the following pages, followed by a high-level project schedule and budget summary.

1. **An Experienced Program Team** - To provide the NDE with a successful online testing pilot for the HSPE program, PEM will assign an experienced and talented project team to the NDE to see that the project is effectively managed and prioritized.

   Overall responsibility for the pilot will belong to the Program Manager, who will monitor project activities, including project quality standards, schedules, costs, risks, and work-scope changes to ascertain that project deliverables meet the State's requirements.

   The Program Manager will work closely with the Product Implementation Manager (PIM), whose primary responsibility is to coordinate the internal resources necessary to implement the Assessment Network for the HSPE pilot. The PIM also will provide regular status reports to the NDE, including tracking and resolving issues that may emerge. Our proposed schedule and budget include an initial planning/kickoff meeting in early 2006 and a follow-up planning session after the first live administration in November 2006.

2. **Setup and Implementation of a Nevada Online Testing Website** - All features of the Nevada online pilot test will be accessed from the Nevada Assessment Network home page (with a "look and feel" similar to that of the home page shown below).
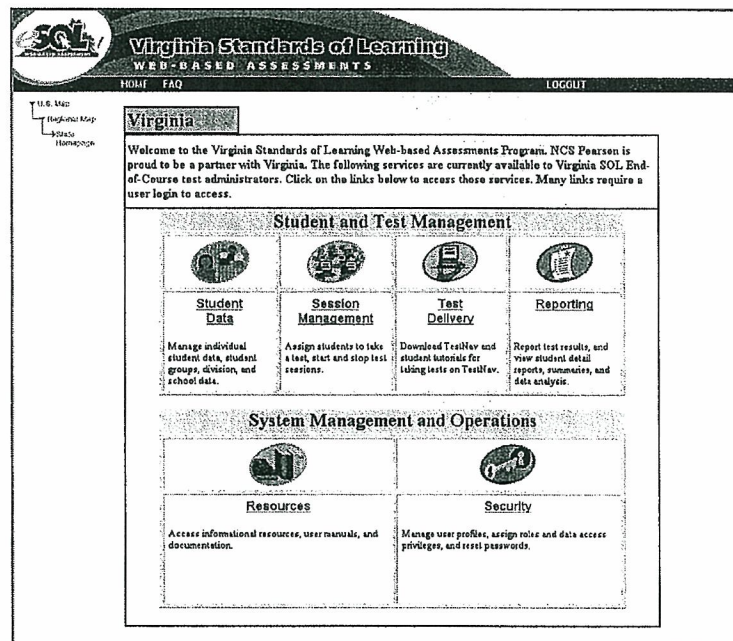
Customer Homepage – All online testing functionalities are accessed from a customized home page.

   As the liaison between the NDE and our internal development and program teams, the Nevada PIM will guide NDE staff through the setup and implementation process to see that your custom-configured site is implemented correctly and on schedule. The Nevada web site can contain your logos and other identifying graphics, and the data collected on the site (for example, student demographic fields) will be stipulated by the NDE.

3. **Test Form Conversion** - PEM will use its standardized Test Form Conversion process to adapt the HSPE retest forms for online delivery during the October/November 2006,

February 2007, March 2007, May 2007, and July 2007 retest administrations. This process takes the original paper test content from a wide variety of industry-standard formats (including Microsoft Word, Quark Express, Adobe Acrobat, Pagemaker, and inDesign) and creates an electronic version of the test in image-based format that is suitable for electronic delivery. Delivering test content in an image-based format (rather than as HTML text) offers two significant benefits:

- It allows us to accurately capture and display test content as it appears in its native application, with all of the rich formatting capabilities, including clarity and readability, intact in the delivered test (for example, mathematical symbols, equations, maps, drawings, etc., that are not easily reproducible in HTML format).
- It prohibits a student from "selecting" test content to cut or copy to another document.

Successfully converting test materials from paper to electronic format requires technical skill, familiarity with traditional test item conventions, and attention to the smallest details. The practical result of our Test Form Conversion process is that electronic HSPE test items look identical to paper HSPE test items and are administered under the same conditions (tools, aids, exhibits, sections, timing, etc.) to the maximum extent possible.

4. **Electronic Practice Assessment Tests (ePATs)** - To allow students to become comfortable with the Assessment Network's testing tools and navigation features prior to "live" testing, PEM will make two electronic practice assessment tests (ePATs) available: a non-scored version in Spring 2006 and a scored version in September 2006. Because the ePATs will contain released forms of the HSPE Reading and Mathematics tests, these practice tests will be similar in content, difficulty, and design to the actual assessments.

   HSPE ePATS will be delivered by means of the eTools Live capability of the TestNav® test delivery engine. (For more information about TestNav, see the Online Delivery, Scoring and Reporting section later in this document.) After an ePAT is downloaded from the Nevada Assessment Network web site, the practice test runs in a stand-alone environment not connected to the Internet. This allows computers with no active web connection to be used for practice testing.

   Beginning in September 2006, the HSPE ePATs will have basic scoring capabilities that include a final report showing item by item results as well as a total raw score at the end of a practice test session. Teachers or students will have the option to save, print, or e-mail the resulting score summary. (Note, however, that the score reports for *practice* tests will *not* be stored in a centralized database for later retrieval.)

5. **Comprehensive Training** - PEM understands that comprehensive, convenient, and time-effective professional development is vital to successfully implementing HSPE online testing. PEM will provide training for both assessment and technology personnel to help them prepare for online testing and understand the online testing system.

   Test Administrator Workshops
   In September 2006, PEM will conduct six half-day, regional workshops for test administrators. The workshops will be presented in a "train-the-trainer" format to allow participating test administrators to train others in their schools. PEM will work with the NDE to identify suitable PC lab settings for up to 30 people per session. This will be sufficient to support 1-2 trainees per high school, depending on size. Our proposed budget includes travel and expenses for two PEM staff for one week.

The workshops will provide hands-on experience in administering the HSPE assessment online and will include demonstrations of how to perform each of the administration tasks required before, during, and after HSPE testing: creating test sessions for each class, adding students to test sessions, administering and monitoring the test, and closing out test sessions once student testing is completed. Additional workshops may be necessary in Spring 2007, depending on the number of schools that have or have not participated up to that point.

Technology Personnel Conference Calls
PEM will conduct a series of one-on-one conference calls between each district's technology personnel and our Level 2 network engineers to assist each district in evaluating their technological readiness for online testing. In advance of the conference calls, districts will be provided infrastructure guidelines and additional documentation addressing the various technological aspects of conducting online testing.

6. **Technical Support** - The Assessment Network is a reliable, robust, time-tested system, designed to avoid or mitigate most anticipated problems. Nevertheless, in an event that would require immediate technical support, our Customer Service Call Center and Technical Support team, working within a well-defined escalation process, will quickly provide your users with the assistance that they need. These highly-trained professionals serve two primary audiences:

   - School IT personnel who typically are responsible for making sure that a school's infrastructure is ready for electronic testing, and
   - Test examiners or administrator who typically set up and monitor the actual computer-based testing activities.

   The Customer Service Call Center is staffed from 4:00 a.m. to 5:30 p.m. Pacific Standard Time (PST), Monday through Friday and can be reached by phone toll-free at (888) 597-1103. The Call Center phone number and an email link will be displayed on every Nevada Assessment Network screen used by teachers and test administrators.

   Because the Call Center is specifically focused on supporting PEM web-based services, customers will immediately be speaking with an Assessment Network specialist who will troubleshoot and resolve the majority of issues in the initial phone call.

   In the event that a Call Center technician cannot resolve a customer issue, the call is assigned a higher level of severity and escalated to a Level 2 network engineer. These specialists have focused expertise in network, infrastructure, and software components of PEM's web-based services. Level 2 network engineers are on-call 24 x 7 and remain focused on an issue until it is resolved to the customer's satisfaction.

7. **Online Test Delivery, Scoring and Reporting** - The Assessment Network system is compatible with the hardware, software, and network infrastructure most commonly found in schools. As a cross-platform system, the Assessment Network provides equal functionality and performance in either a Windows or Macintosh environment. Test administrator functions are accessed via the most common Internet browsers (Internet Explorer, Firefox, Apple Safari).

   Students will find that taking tests online via the Assessment Network is similar to taking the traditional paper-and-pencil test. The items will appear on the screen one at a time, just as

they appear on the paper-based test. Various tools and exhibits such as a calculator (four-function or scientific), protractor, compass, ruler, highlighter, formula sheet, etc. can be turned on or off on an item-by-item basis, allowing for more granular control over test administration conditions. Audio and large-print forms can also be provided, if desired, but are not included within the scope of this pilot project.

Tests are delivered and student responses captured through TestNav™, our proprietary test delivery application. TestNav is a locally-installed Java application that is used instead of a browser to maintain security and continuity while accessing the test content and delivering student responses over the Internet. TestNav will be downloaded from the Nevada Assessment Network test delivery web page and can be installed on each machine or, for greater ease of administration, on a local server. Installation of TestNav (accomplished via a three-screen installation wizard) typically takes 60 – 75 seconds.

Test Security

To maintain the integrity and validity of a test, test content must be kept secure and student data must remain confidential. The biggest single distinguishing factor between the PEM online testing system and our competitors is the extent to which the Assessment Network provides security for test content and confidential student information. By "locking down" the testing environment from accessing other system resources, such as browsers, instant messaging and email, our TestNav client provides extensive measures to protect against cheating.

The Assessment Network's use of encryption technologies enables test content to be securely hosted on a public network without the data being compromised by unwanted access. Test content is encrypted at all points of the distribution channel until it reaches the delivery device (e.g., the student's workstation) where it is decrypted in memory for display during a testing session.

Dependable Test Administration

The Assessment Network and TestNav also include robust features for greater continuity and service reliability during test administration.

The Proctor Caching Server (PCS) is a locally installed software component that allows encrypted test content to be downloaded from the central Assessment Network server and securely stored prior to testing. Test content is then served from the PCS over the local network during testing instead of over the internet, helping to insulate the student testing experience from variability in internet access. Use of the PCS is optional, but recommended, and is included with the base system.

The Early Warning System (EWS) feature provides additional continuity measures by managing server communications. For instance, if a student's workstation is unable to transmit responses to the testing server during a test (due to a prolonged service interruption), EWS is designed to save a student's responses to an encrypted file as a backup while allowing the student either to continue testing or to exit the system without losing any of the responses the student has entered. When a student restarts their testing session, EWS automatically transmit responses back to the testing server.

Prior to completing their tests, students are provided with a test summary screen that highlights unanswered items or items that the student had previously marked for review. This allows the student a final opportunity to make sure that their test is complete and that they are

satisfied with their answers. Students are asked twice to confirm that they wish to submit their test before exiting the system.

Rapid Scoring and Reporting
PEM will work with the NDE and its assessment contractor to transfer and verify that the appropriate scoring keys, reporting categories, and raw score conversion tables have been accurately loaded into the system prior to testing. Individual scale score and proficiency level results will be provided online within 24 hours of completing a testing session, along with an updated summary roster of student results.

8. **Integration with your Current Reporting Processes** - At the conclusion of each testing window, PEM will produce an extract of testing data to be provided to the NDE and its assessment contractor for integration with paper testing results. PEM will work with both NDE and the assessment contractor to determine the correct file format, record layout, and method of transmission for the data file.

9. **Comparability Analysis** – PEM's Research Services department will work with the NDE to design and conduct an appropriate research study comparing item and test performance in the online versus paper and pencil administration modes. PEM staff have been prominent in developing key designs and methodologies that assess the relative impacts of the various possible paper and computerized test administrations on a variety of student groups, (SES, ethnic, gender); grade levels (elementary, high school); test content areas (math, reading, writing); and test formats and conditions (e.g., M/C, C-R, timed, untimed, computer-administered, adaptive). PEM psychometric staff have conducted comparability studies in many states, including Texas, Minnesota, Michigan, Maryland, Virginia, and Florida.

PROJECT SCHEDULE

PEM anticipates the following high-level milestone schedule for the proposed pilot project:

Initial Project Planning meeting	Feb-06
Development of ePATs (electronic practice tests) begins	Mar-06
ePATs available	Apr-06
Development of enhanced ePATs begins	Apr-06
Nevada HSPE testing website available	Sep-06
Enhanced, self-scoring ePATs available	Sep-06
Student and administrator tutorials available	Sep-06
Site certifications begin	Sep-06
Training for test administrators	Oct-06
HSPE October/November test administration	Nov-06
Follow-up planning meeting	Dec-06
HSPE February test administration	Feb-07
Comparability Study	Mar-07
HSPE March/April test administration	Apr-07
HSPE May test administration	May-07
HSPE July test administration	Jul-07

Timely completion of these activities is contingent upon notification from the NDE of its intent to proceed no later than January 31, 2006. If these timeframes are not feasible, we will be glad to work with you to develop a delivery schedule that meets your needs.

BUDGET

The budget for the proposed project is presented below. All costs are firm, fixed for the agreed-upon scope of work, with the exception of a per-test charge based on an unknown number of tests administered. For preliminary budget estimating purposes, we have provided a projection of testing volumes for each test administration, assuming that each student will take both the Reading and Mathematics forms within the same administration period.

Program Management and System Setup	$407,023
Training	$20,400
Technical Support	$141,650
Comparability Study	$60,635
TOTAL FIXED COST	$629,708

Students Tested (retesters only)	Count	$3.31/student
November 2006	8,000	$26,480
February 2007	6,000	$19,860
April 2007	17,000	$56,270
May 2007	3,000	$9,930
July 2007	2,000	$6,620
TOTAL VARIABLE COST		$119,160

TOTAL ESTIMATED COST	$748,868

Accepted: _____   Date: _____
              Nevada Department of Education

Name: _____

Title: _____