

MAPAC News

Mid-Atlantic Personnel Assessment Consortium, Inc.
Spring/Summer 1999

President:

James E. Frankart
Pennsylvania State Civil Service
Commission
320 Market Street
Harrisburg, PA 17108-0569
(717) 783-2697, Ext. 3517
(717) 783-0838 (FAX)
JFrankart@scsc.state.pa.us

Past-President:

David G. Hamill
The Pittman McLenagan Group, L.C.
6626-A Wilson Lane
Bethesda, MD 20817
(301) 320-9500
(301) 320-9525 (FAX)
davidh@pittmanlc.com

President-Elect:

Linda Dunn, Director
Examinations & Civil Service Operations
City University of New York
535 E. 80th. Street - Room 603
New York, N.Y. 10021-0767
(212) 794-5672

Treasurer:

S. Ann Stewart
Delaware State Personnel Office
P.O. Box 1401
Dover, Delaware 19901-1401
(302) 739-5458
(302) 739-3000 (FAX)

President's Message

The State of MAPAC

I suppose that it seems a cliché but as I write this it is the Friday before the Fourth of July weekend. I realize that my term as President is half over. The fall conference in New York will be my last official function as your President. At this time I think is fitting that I report on the current state of health of our organization. I think I can say with a great deal of confidence that MAPAC is alive and well. Our conferences are well attended and requests for training remains high. I am pleased to report that the committee structure at MAPAC has been revived and is functioning once again. This has resulted in the participation of more members in the process.

Membership

During this year we have taken in two new members, The Department of Immigration and Naturalization and the New York City Transit Authority. An application has been sent to Massachusetts and we are awaiting its return. I am pleased to see us adding to our numbers but I am concerned about current member participation. We have several agencies who continue to pay their dues but take a very limited role in

involvement in activities. MAPAC is an organization that requires participation. It is an area that requires additional work.

Training

The job analysis course is in the process of being updated. It will be offered in the fall on September 15 – 17 1999 in Harrisburg. The committee has done an excellent job of updating the materials and the course is expected to be well received.

Newsletter

Betsy Kaido and Jill Guice have done an excellent job of preparing the newsletter during the past year. I am sad to report that both of them will no longer be working on this project after this year. The newsletter is vital to MAPAC and we are in the process of recruiting for persons to fill this vital role.

Joint Projects Committee

This new committee is working on testing procedures for supervision and management. Charles Sproule is chairing the committee, and a plan for the project is under development. One of the reasons MAPAC was formed was to allow member agencies to work on projects that required larger resources than the individual agencies had available. The formation of this committee allows us to get back to this purpose.

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MAPAC List and Web Page

Elliot Lassen has done a fine job of keeping the listserve operating. This valuable tool keeps MAPAC members informed of late-breaking developments and can notify the membership of any changes. Bill Waldron of IPMAAC has done a wonderful job of operating a web page for MAPAC. In the past only our programs were listed on the web page. They have now expanded our allotment of space and the newsletter is now on the World Wide Web.

Treasury

MAPAC is in good financial health. Dues were raised several years ago and we continue to have non-members attend our conferences and training sessions. This has resulted in a steady income stream and given MAPAC a healthy surplus. If an agency has ideas on how this surplus may be used to promote the field, please submit them to any of the officers and due consideration will be given to the proposal.

On a personal note I would just like to say that it is an honor and a privilege to serve as your President. MAPAC has been very useful to me in my career as a personnel specialist. I have learned many things about this interesting field from my colleagues and have developed professional relationships with a great group of people. I have been impressed by the way that most people in this field really care about their work and are willing to share information with others in the hope of improving

the field of selection.

I hope to see you in New York on September 29 – October 1.

Sincerely,

James Frankart,
President

MAPAC Spring Business Meeting Minutes

April 28, 1999
Philadelphia, Pennsylvania

The meeting was called to order by President Jim Frankart.

Roll Call: Eleven member jurisdictions were present for the business meeting.

Reports

Treasurer: We currently have \$14,938.36 in the treasury. All members have paid their dues. MAPAC has been incorporated in Delaware.

Program: MAPAC is continuing to respond to the members' interests in programming. A survey was handed out to assess interests for future meetings and committee members were thanked for all of the work they have done.

Training: The Job Analysis course is being revised and should be presented this summer.

Membership: We currently have 22 members. Massachusetts has expressed interest in joining. Beth Risser will be resigning as

the membership chair in September and members interested in working on this committee should contact Jim Frankart.

Communications: Betsy Kaido will be resigning as chair in September. Members interested in working on this committee should contact Jim Frankart.

Cooperative Projects: Charley Sproule reviewed the direction this committee is heading and the input he received since the last meeting. The committee will meet at lunch.

Old Business

No old business was considered.

New Business

To make it easier for students to attend meetings, the members agreed to a \$10.00 student fee. Information for future meetings will be distributed through web sites of colleges near the meeting site.

Maryland Department of Transportation is housing the MAPAC video library. Proposals for new videos will be considered.

Submitted by:

S. Ann Stewart
MAPAC Secretary Delaware State
Personnel Department

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Memoriam

Gerard Clifford Moylan Torruella (1949-1999)

MAPAC mourns the loss of long-time member Gerard "Jerry" Moylan. Most recently, he was Personnel Analyst Supervisor for the Recruitment and Examination Division in the State of Maryland's Office of Personnel Services and Benefits. He was tragically killed in a bicycling accident in Spain on July 9, 1999. At the time, Jerry was part of a pilgrimage on el Camino de Santiago.

Jerry was born and raised in Puerto Rico and was a graduate of Franklin and Marshall College in Pennsylvania. In addition to his career in government, he had an enthusiasm for life. His interests included hiking, biking, traveling, and music. He was truly a musician extraordinaire, with a passion for percussion. He co-hosted a weekly radio program in Baltimore, "Fiesta Musical" and organized the annual Baltimore Rhythm Festival.

Jerry began his career in public service with the State of Pennsylvania. He effectively served the Pennsylvania State Civil Service Commission as a Unit Supervisor in the Division of Evaluation of the Bureau of Examinations for many years.

Jerry then worked for the State of Maryland for two decades. Jerry was an accomplished bilingual manager and trainer. Throughout his career, he was known for his

professionalism and creativity, and his commitment to merit, fairness, and equal employment opportunity.

He served as Treasurer of MAPAC in 1983-84 and was Chair of our Affirmative Action Committee in 1980. As an active MAPAC participant, Jerry sometimes challenged us to meet the high professional standards he expected of himself and us. His discerning questions and comments often contributed considerably to difficult MAPAC discussions and policy debates. Jerry was a very sociable MAPAC member who helped new members fit in and feel at home in our organization.

What set Jerry apart at work and socially was his dynamic spirit and interpersonal skill. He was open and giving with matters of importance and earned all of our respect and affections. He will be deeply missed.

To honor Jerry's memory, the following scholarship has been established: The Moylan Scholarship Fund for Music, Mercantile Bank, 5119 Roland Avenue, Baltimore, MD 21210.

Elliot D. Lasson, Ph.D.
Personnel Analyst
State of MD
Dept. of Budget & Management

SPRING MEETING PRESENTATIONS

MAPAC WORKSHOP

Computer Administered Testing: Tennessee's Experience

Robert A. Perry, Tennessee
Department of Personnel

The development of computer administered testing in Tennessee was set in motion by the fall of the typewriter and its replacement by word processing systems. The need to test data entry and word processing skills in a post-typewriter environment provided the initial impetus for the evolution of a computer-based testing system. Tennessee started using the Minnesota Clerical Abilities Battery two years ago as a selection device for clerical staff. Tennessee used Minnesota's item pool at the time, but it was not provided with Minnesota's codes. Cost considerations spurred Tennessee to develop its own system of computer-administered testing. The system is named FXTEST.

Tennessee has open, continuous testing and tests approximately 45,000 applicants per year using FXTEST. Applicants who apply for testing pass through a minimum qualification approval system before they are admitted to the test. Tennessee's certification system works on an overnight basis and is independent from its testing system.

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Robert (Tony) Perry's presentation focused on some of the choices and considerations that enter into the design of an applicant testing system. The directions that Tennessee followed in its development of such a system were consistent with its needs and resources, but equally viable alternate directions could have been followed with similar success by other entities with differing demands and assets.

Security is an essential concern in testing for selection purposes. One problem with stand-alone systems, as opposed to networks and mainframes, is that they do not provide sufficient security (although WindowsNT has better security features than other operating systems). Security considerations contributed to the choice of networks over stand-alone systems.

Another factor in selecting a platform is stability. Mainframes tend to go down more frequently than do networks. Storage issues are also important in the determining the structure of a test administration system. Text demands relatively little memory, but images and videos are far greater gluttons with respect to memory. The old adage equating one picture and a thousand words is fairly accurate in terms of information systems: GIFs and JPEGs are relatively compact, but bitmaps, which are far clearer than the aforementioned formats often encompass 250 kilobytes, and videos usually require several megabytes for short displays. The bottom line in terms of memory is that some examinations require up to megabytes.

These considerations led to the choice of a WAN (Wide Area Network) as the solution to Tennessee's test administration problems. A WAN, controlled by a large server, can be secure, stable, and mnemonically capacious. A single WAN connects all the test sites in Tennessee and a single server controls this WAN.

Tennessee's testing layout is organized around test centers and many of the design features of FXTEST are affected by this arrangement. The physical arrangement in each test center resembles that of the traditional language lab. Proctors, who are government employees, monitor the progress of each of the test takers from a station at the test center. Test takers' progress can also be monitored from the server controlling the network.

Because Tennessee has a higher level of control over its testing set-up than do entities that administer tests on stand-alone computers or under more decentralized configurations, some design concerns are less important for its system. The only data that remain resident in the networked computers when they are not connected to the network are the identities of the applicants and of the tests that they took. Therefore, many of the test security concerns that would be problematic in stand-alone arrangements are vastly simplified (e.g., it is harder for unauthorized persons to view test items). Moreover, the fact that employment security staff alone are responsible for test administration adds to the level

of control exercised by the system.

Administering the testing process "in-house" also allows for greater control over the type of hardware used to administer tests. Because the hardware is known (e.g., all of the component computers have clock speeds over 200 megahertz) the test designer is free to produce multimedia assessments, secure in the knowledge that the hardware will behave reliably.

Because Tennessee has decided not to use tests with time limits, the FXTEST software is not designed to run in real time; that is, it does not measure the time expended by test takers and it does not have to account for the time used in the presentation of items. This decision has allowed the development of an extremely parsimonious system in terms of size and demands. FXTEST itself occupies only 308 kilobytes. The shell is written in Visual Basic 4. Some of the special testing features include allowing test takers to skip and return to items, select and de-select responses, mark items for later review, access help screens from anywhere in the test and quit from anywhere in the process. The test taker is prompted ("Are you sure you want to quit?") when items are left incomplete.

Applicants appear satisfied with the system, primarily because it is able to score the test and provide information on the applicant's grade and rank as

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the test is completed. Mr. Perry also provided a demonstration of FXTEST in action that showcased the major features of this impressive system.

Submitted by:

George M. Davidson
City University of New York

Designing an In-House Applicant Tracking System

Paul D. Usala, Ph.D., US
Immigration and Naturalization
Service

This was a half-day workshop on how to use a database as a management tool for monitoring applicants as they progress through an assessment process. The Immigration and Naturalization Service (INS) uses a database to manage its promotional assessment operations, and Dr. Usala used the INS model to demonstrate this tool. All persons who want to be promoted to border patrol supervisor must take an assessment battery consisting of a three-component multiple-choice test and a self-report measure of work history. To monitor this process Dr. Usala developed a relational database using Microsoft Access.

The first step was to identify the components needed to complete the assessment process. For INS, these components are:

1. Develop and print assessments and preparatory material.

2. Disseminate introductory and process information (memos, briefings).
3. Arrange for assessment administrators, sites, and times.
4. Distribute the personnel announcement, application to take the assessments, and assessment schedule.
5. Receive applications.
6. Send scheduling confirmation notice, preparatory materials and self-report measure.
7. Administer multiple-choice tests and scan answer sheets.
8. Receive self-report measure and keypunch the data.
9. Score tests and work history measure, and combine into total score.
10. Send feedback to candidates.
11. Respond to inquiries.
12. Receive lists of competitive candidates and compile list of top scorers.

The database consists of four primary tables and three support tables that handle: preparing mailing tables; scheduling of administration sites, times and proctors; receiving applications; importing written test and work history scores; sending feedback to candidates; and compiling the eligible lists.

Dr. Usala then demonstrated how to construct a database, beginning with the construction of a simple data table. Data tables are the central building

blocks of a database. Then he proceeded to demonstrate a simple query, which allows users to ask questions about the data contained in the tables. He also covered forms and reports. Forms simplify the entry of data into the table. They allow users to create a screen where persons can enter data without knowing the specifics of other parts of the database. Reports are the part of the database that allows users to search the entire database and extract the data they are interested in.

This session was an excellent introduction into how a database can be a powerful tool for helping to manage an assessment system.

Submitted by:

James Frankart
PA Civil Service Commission

MEETING PRESENTATIONS

Sylvan Prometric Computer- Based Testing

Gerald Rosen, Ph.D., Sylvan
Prometric

Gerald Rosen of Sylvan Prometric discussed briefly the history of computer based testing and considerations an agency/business should have prior to utilizing the computer to administer tests. In addition, Mr. Rosen briefly discussed the Sylvan testing centers. Sylvan Prometric administers approximately 2 million tests per year. They have over 2,000 testing sites located in 120 countries. They are testing for

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all types of professions, including licenses for various professionals and tradesman, in addition to their testing of students. They are in the process of administering tests by the Internet.

They have incorporated safeguards in their tests to preclude hackers from gaining access and applicants inadvertently exiting prior to their finishing. For instance, to exit the test, a candidate would have to exit three screens, each screen asking if the candidate is sure he/she wants to quit.

Submitted by:
Herb Thomas
PA Civil Service Commission

Item Bank Basics

Kathryn Paget, Manager, Western Regional Item Bank

Using her experiences with the Western Regional Item Bank (WRIB), Ms. Paget gave advice on how to develop an item bank. An item bank is a computerized collection of multiple choice, true/false, and alternate choice test questions that have been categorized by subject matter. WRIB was begun in 1981 and grew out of discussions among members of Western Region Personnel Assessment Council (WRPAC). The item bank was designed to be a shared resource to save WRPAC members from having to reinvent the wheel. Currently, WRIB contains 49,000 test questions in over 300 separate subject matter categories, and serves 196 public jurisdictions.

WRIB provides several services to its members, including:

- Printouts of review test items with past use statistics
- Printouts of customized test in camera-ready format including test instructions, time limits, scoring limitations, and section sub-test headings
- Scoring of machine readable answer sheets
- within a 24-hour turnaround
- Printouts of scoring statistics regarding item history and quality

Keeping the items refreshed is an ongoing process. WRIB staff try not to get rid of items; instead they attempt to rescue them. Without staff or Subject Matter Experts to write new items, WRIB relies on the membership to provide items. Anywhere from five to 100 new items are added each week. There are a variety of item options (i.e., tables, charts, figures, maps, audiotapes, etc.), that provide flexibility.

Each item needs a unique identifier. In WRIB, items are identified by a categorization code. An advantage to this system is that the item number has meaning and it is useful for spot-checking. A disadvantage to this system is that it limits the number of items. To avoid running out of numbers, Ms. Paget advises: Think big! Another alternative for assigning item codes is to order the items sequentially. Using this system, a test analyst would not have a limit to the number of items.

The downside is that the item codes have no meaning in and of themselves.

Another aspect to think about when using a categorization code system for identifying items is the way in which categories will be listed or numbered. There are several options: title order, category order, cluster descriptions, global or specific, or hierarchical. Ms. Paget advised leaving spaces in order to plan for categories that might be needed in the future.

WRIB has standards for structure, presentation, layout and grammar of the items. The goal is to test candidates' ability in specific KSA, not their test taking ability. It is also important to have information on how well the item performs. Some information to include for each use of the item is: the code, date, N, % correct, item discrimination index, and ethnicity breakdown.

When designing an item bank system it is important to think about what functions it will be used for. A custom system could be designed, an off-the-shelf system could be used, or the services of an item bank could be used. Ms. Paget advised choosing a system that provides item analysis/history, links to applicant tracking, and provides room for growth.

Submitted by:
Amy Bauer
Maryland State Highway
Administration

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The Website as a Selection Tool

Doug Swanson, Maryland
Department of Budget and
Management

Greg Hughes, Delaware
Department of Personnel

The Internet

Although it was originally marketed to the public as a medium for entertainment, the Internet's utility as a business tool is evolving quickly. More now than ever before, organizations of all sizes are using the web to communicate information. A practical resource for both conveying and retrieving information, the web could very well re-write the way human resource professionals do business. Prime examples of how the web may change our lives were demonstrated by Doug Swanson of the Maryland Department of Budget Management and Greg Hughes of the Delaware Department of Personnel. Although their presentations were different, in many ways they conveyed the same message. As the role of Human Resources evolves, so to does our need to learn how to use the web.

Using the Internet in HR

As a result of recent budget cuts and policy changes, more business among Maryland State agencies is being conducted over the Internet. Maryland has created a centralized web-based service that is capable of providing eligible lists to all State agencies while simultaneously reducing the amount of paperwork

needed to conduct day-to-day personnel operations. For example, personnel selection plans and job descriptions are now handled through e-mail or by way of a web submission. Also available through the web are the guidelines for recruitment and selection, and the annual schedule of exams. The web's utility as a cost-effective communicator of real-time information is only one potential advantage; included at no extra charge is the added benefit of reduced paperwork.

Reaching Your Audience

Almost as important as the "what and how" of information communication is the audience it reaches. Ideally, a recruiter looks to reach a large audience and find the best talent that lies within. The web enables professionals in personnel to reach that audience, and as a result it is the ideal tool for recruitment. Connected to most of the major search engines, the State of Maryland's web site has the public as its biggest user, and its biggest "hit" receiver is its list of jobs. Over the Internet an individual is able to look at job bulletins which list the requirements and specifications for each position. Web users are also able to review information about health benefits and obtain most of the traditional HR forms. Taking advantage of the web's versatility, Maryland also uses its site to collect information that will guide future recruitment efforts (e.g., target recruitment sources).

Using the Web Wisely

Although the web seems to be the solution to many of our problems, there are a few pitfalls to be aware of. Some of the issues to keep in mind include a need for everyone to have access to either e-mail or the web, and resistance to change. The website must be maintained daily to insure that the information being transmitted is accurate, and although this is less labor intensive than changing all of the paper documents located throughout the State, it still requires a watchful eye.

The Big, Shallow Pond

Referring to the Internet as a huge pond that is only three inches deep, Greg Hughes from the Delaware Department of Personnel stressed the importance of site content and organization. One of the major factors that influenced the development of Delaware's site was making it understandable to users. Mr. Hughes also stressed the ease with which documents (e.g., employee manuals) can be maintained on the web. Rather than having to insure that every employee has an updated paper copy of a given manual, insuring that every employee has access to the home page becomes the issue. Maintenance of a given web-based document can be done rather quickly, and once a change is made, all who have access to the web page will have an updated revision.

Like Maryland's, Delaware's weekly job posting is one of the

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more popular State maintained sites (second only to a traffic cam). Along with job postings, training and development information is also handled via the web. Included on the web page are registration forms for training events, a schedule of classes, and the dates and locations of the upcoming training events. The Delaware web page handles most facets of the HR Department, and provides direct e-mail links to the division managers of each respective HR division.

Some Things to Consider

- Insure equality of access to all position openings for both users and non-users alike.
- Consider where you want to go with the web page in the future. Laying out a plan that factors in available resources and limitations is always helpful.
- Post downloadable job application forms and HR documents, which can be filled, out and faxed or mailed. Eventually have employment applications filled out on-line.
- Provide a list of phone directories for all State agencies via web page; include office locations.
- Common constraints include organization of the web page and the power of the server.

Understanding our Role

Increasing our ability to communicate while reducing the cost of doing so, the Internet has potential that is only now coming to be understood. For both Maryland and Delaware the

changes have resulted in a huge reduction of paperwork, a positive move towards the paperless environment and a tremendous increase in the speed with which business is conducted. The need to take advantage of such a service tends to speak for itself, and as we move toward the vision of a paperless environment, use of the web as a communications driver appears to be essential. As professionals in personnel we must take responsibility for learning how to use the web, take advantage of its power, and attempt to make innovative contributions of our own.

Submitted by:
William Bennett
Office of Court Administration

Computerized Job Analysis and Assessment Tracy Panase, ACT, Inc.

ACT's Work Keys is a computerized job analysis and assessment system. This product consists of four components: job analysis, skill assessments, research and reports, and instructional support.

The job analysis component is accomplished by creating a job profile. A trained profiler typically spends 1/2 day at the job site observing incumbents in the position to be analyzed. This is followed by a having a mix of the incumbents complete a survey form.

Then incumbents and the profiler work together to develop a

complete task list. From this, they create a list of the most important job tasks. Typically the critical task list consists of five to eight tasks. Criticality of each task is determined as a function of activity importance and relative time spent at the activity.

For each critical task the incumbents and profiler decide which skill(s) and skill level is needed to perform the activity at both the entry and performance level. There are Work Keys has identified eight fundamental workplace skills and organized them into three skill areas. Skill areas are also scaled from low to high difficulty/complexity on a range of 1 to 7. These are the skill areas:

Communication skills

1. Listening (L)
2. Reading for information (RFI)
3. Writing (W)

Problem solving skills

4. Applied mathematics (AM)
5. Applied technology (AT)
6. Locating information (LI)
7. Observation (O)

Interpersonal skills

8. Teamwork (TW)

Ms. Panase presented a sample job analysis for the job of Customer Service Representative, which consisted of the following critical tasks. The workplace skills are shown in parentheses after each task :

- Assists customers to select specialized telephone services. (L, RFI)

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- Provides prompt and efficient service to customers by resolving their problems or expediting requests. (L, W, TW)
- Works in teams to meet sales goals. (TW)
- Changes the address and phone number of customers in the computer database. (LI, W)

Enters account information obtained from customer into computer database. (LI, W)

These tasks were used to create the following profile:

SKILL	ENTRY LEVEL	PERFORMANCE LEVEL
Reading for Information	4	5
Applied Mathematics	4	4
Applied Technology	N/A	N/A
Listening	3	4
Writing	3	3
Locating Information	4	4-5
Teamwork	3	3
Observation	3	3

The second component is the

assessment of skill levels. Skill assessment is available in a variety of formats including video- and audio-based questions. The assessments can be modified to meet special requirements. If speed is a factor, then the assessment can be timed. If a particular skill is crucial, then that may be the only skill assessed.

The third component is the Research and Reporting feature. Research can be done to determine employee potential or produce rosters of employees with certain skills. More complex vocational information reports are also producible. For example Work Keys can create estimates of how much time will be required to complete a project based on employee skill level.

The final component is Instructional Support. Study guides are provided which help employees develop the fundamental workplace skills.

Submitted by:
Marie Liddle
NYS Department of Civil Service

Competency-Based Computerized Testing: Proselect

Ron Nardoni, ClearView
Consulting

ClearView Consulting is a human resources and information technology consulting firm that deals with all aspects of designing and implementing human resource programs. One of their products

is ProSelect, which is an integrated software package. ProSelect is based on a hierarchical model that emphasizes the need for staffing, training and development at lower levels of the staffing pyramid and for succession planning at the higher end of the pyramid.

Proselect allows managers to review positions and determine a set of interviewing guides based upon the competencies necessary to perform the jobs. A set of master guides is contained in the system, and managers can download the masters and modify them to meet the needs of the particular jobs. Managers can then use the guides to interview applicants, and after making their selections they can use the guides to provide feedback to the candidates.

Benefits of the system include: elimination of inappropriate questions, consistent measurement scales, face validity, tracking of the selection process and the hiring of the best candidate. Mr. Nardoni then proceeded to give a demonstration of how Dow uses the system. One interesting aspect of this demonstration was the use of the Internet to set up the system and implement it in all the company offices spread throughout the U.S. and the world.

Submitted by:
James Frankart
PA Civil Service Commission

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Applicant Management – PeopleSoft

Ted Sullivan, PeopleSoft USA,
Inc.

Ted Sullivan, HRMS Product Consultant for PeopleSoft USA, Inc., provided a demonstration of the use of PeopleSoft programs for applicant management. He demonstrated its use in both recruiting and tracking candidates, and as a method to identify and assess competencies so that training needs could be identified, and training and education activities successfully achieved could be assessed and evaluated for future openings within the organization.

Mr. Sullivan demonstrated the ways in which the PeopleSoft Management System could be implemented to provide accurate up-to-the-minute knowledge regarding: personnel administration, position management, competency management, recruitment, training administration, career and succession planning, salary administration, benefits administration, and planning. Mr. Sullivan indicated that the competency management module of the Applicant Management System would enable an organization to satisfy immediate needs as well as help employees plan their careers -- so that they may grow as their organization grows. Competencies of value to the organization can be identified and associated with individuals, jobs, positions, or project teams. The system also enables management to identify an individual's proficiency level within specific skills. As a consequence

of implementation of this system, Mr. Sullivan believes that successful integration of competency, management, career and succession planning, and training administration solutions are at the fingertips of managers. With this system an organization is enabled to manage positions and compensation, and to recruit, hire, train, manage, promote, transfer, allocate, and retire its staff effectively and efficiently.

Submitted by:
Rosemarie K. O'Rourke
CUNY

Effective Recruiting by Internet

Marisa Harper, US Immigration
& Naturalization Service

Marisa Harper from (INS) made a presentation on how her agency is attempting to make effective use of the Internet in their recruitment of applicants for a large number of Border Patrol positions. The National Border Patrol Recruitment effort has been expanded from a 1-person operation in 1995 to a 6-person team in 1999. Although the use of the Internet has taken on a greater role in the recruitment process, the program also places a heavy emphasis on the development of their national advertising campaign, the establishment of effective college/university relations, and ongoing partnerships with national minority and women's organizations. The team also makes a special effort to reach out to military personnel who are getting ready to begin their

transition to civilian life.

In July of 1997, the INS went on-line using the OPM website to advertise and accept applications. In the summer of 1998, the official Border Patrol website was established at (www.ins.usdoj.gov). This site provides applicants with detailed information about careers with the Border Patrol. In the future, the INS recruitment team plans to place banner ads on related law enforcement, college, and diversity sites. These ads will link directly to the INS homepage. During this time, an increased emphasis will be placed on the recruitment of females between the ages of 20 and 34.

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Over the past few years, the number of applications received via the Internet versus the automated phone application system (TAPS) has grown significantly. In the first two and one half months following its inception (July 1997), about 10%

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of the qualified applicants responded via the Internet. During FY '98, this percentage increased to about 50%. For the first six months of FY '99, the number of qualified Internet applicants had risen to 67%.

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The INS Recruitment team has also attempted to gauge the effectiveness of its recruiting approaches by asking job applicants how they found out about the job for which they are applying. During FY '97, the largest lead generator was

newspaper ads (31%) followed by INS employees (27%) and Federal/State employment offices/programs (11%). By FY'98, the Internet had become the biggest lead generator at 27%. This was followed by INS employees (21%) and newspapers ads (19%).

In July of 1997, the INS went on-line using the OPM website to advertise and accept applications. In the summer of 1998, the official Border Patrol website was established at (www.ins.usdoj.gov). This site provides applicants with detailed information about careers with the Border Patrol. In the future, the INS recruitment team plans to place banner ads on related law enforcement, college, and diversity sites. These ads will link directly to the INS homepage. During this time, an increased emphasis will be placed on the recruitment of females between the ages of 20 and 34.

Over the past few years, the number of applications received via the Internet versus the automated phone application system (TAPS) has grown significantly. In the first two and one half months following its inception (July 1997), about 10% of the qualified applicants responded via the Internet. During FY '98, this percentage increased to about 50%. For the first six months of FY '99, the number of qualified Internet applicants had risen to 67%.

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In the future, the INS recruitment team wants to increase their presence on the Internet by posting job vacancies on a number of other employment sites. Since each ad will have its own unique extension, they will know which sites generate the most leads. A yearly plan will be developed and modified quarterly to add new sites or adjust existing sites. They would also like to create an "alias address" which is easy to remember and can be included with their other advertisements. An example of such an address would be: www.borderpatrol.gov.

For more information, you may contact Marisa Harper by phone at (202) 305-7399 or via e-mail at: Marisa.B.Harper@usdoj.gov.

Submitted by:
Dan Hill
NJ Department of Personnel,
Selection Services

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New York State's Innovations in Computer-Assisted Testing

Elizabeth M. Kaido, Ph.D., New York State Department of Civil Service

Dr. Kaido demonstrated three types of New York State (NYS) tests that are administered using PCs: multiple-choice, written simulations, and performance tests. Using a software package that offers very nice graphics, civil service programmer-designers transform traditional multiple-choice tests into computer-administered versions that incorporate several user-friendly features. Among these are the capability to: change answers, skip and then return to questions, flag questions, review questions and answers, keep track of time remaining, and confirm that the choices the test takers made are really the choices they intended to make. These tests are scored instantly and offer administrators the option for printing scores notices and producing eligible lists. Feedback from administrator-users, both large and small, indicates that the system is friendly to test takers and test administrators alike.

Written simulations present test takers with an initial situation-based problem that evolves according to the choices the test takers make as they progress through the problem. Test takers gain points when they ask the right questions and make the right decisions, and they lose points when they waste time asking useless questions and make poor decisions. As the test takers select options, the computer reveals the outcome of the options. The

computer also prompts test takers what to do next and corrects them if they appear not to be following instructions correctly. For example, a test section might direct test takers to choose four questions to ask from among eight possibilities. Test takers who select only three questions will be reminded that they need to make an additional choice.

The computer administration system for simulations offers user-friendly features similar those available for the multiple-choice tests.

The computer-administered performance tests cover a variety of keyboarding skills.

- Typetest – a test of keying speed and accuracy
- 911 Test -- a test of emergency-data entry for public safety dispatchers and related jobs
- Demotest – a test of batch-data entry skills for numeric, alphabetic and alphanumeric data
- DB Clerk – a test of data record creation, updating and deactivation, and data retrieval

These tests include practice sessions to help test-takers familiarize themselves with what they will have to do during the actual test and they are designed to mimic as closely as possible the skill demands of the jobs. In addition, they are easy for test administrators to set up and use. NYS continuously invites comment from test takers and test administrators alike, and regularly makes improvements to the tests based on the feedback from users.

What Does the Literature Say?

Educational Testing Service researchers step back from concerns such as "What will I do if the diskette doesn't fit in the A: drive?" and consider some theoretical issues relating to scoring systems for computer-administered testing.

Bennett, R.B., & Bejar, I.I. (1997). *Validity and automated scoring: It's not only the scoring* (Research Rep. No. RR-97-13). Princeton, NJ: Educational Testing Service.

Bennett and Bejar consider several practical computer-administered-testing (CAT) issues in the context of construct validity. For example, for computer-naïve test takers, CAT tests may be measuring the ability to learn how to operate and interact with a computer rather than the subject area that the test content covers. One way to address this problem is by providing test takers with tutorials that teach how to use the computer to navigate through the test and how to enter their responses.

CAT also enables test makers to increase the fidelity of employment tests. Tests can now more closely mimic the job. As a result the complexity of the responses that test takers make is increased. This in turn increases the demand for complex scoring routines, possibly to a point that the test designers simply cannot meet. The test designers are then

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forced to simplify the test task. For example, in writing assessments, the ideal situation would be for test takers to enter text that they compose and then for the computer to read and analyze the composition. The computer would then assign a score that takes into account the mechanics, such as grammar and usage, and the more complex factors such as organization, style and tone. Anyone who has used a spelling and grammar checker knows how fallible those "scoring" systems are. And they don't really address the quality of expression. Because of the difficulties in designing a system to adequately score compositions, CAT test designers generally retreat to item formats that require the correction of portions of sentences that are mechanically deficient. They also must limit the kinds of corrections that can be made so that the scoring can be done with a line editor type of interface.

One of the features of CAT testing that customers have demanded and gotten is nearly continuous testing. The downside of this from test developers' point of view is the concomitant need for huge numbers of items that can be instantly assembled into valid tests. Test developers are responding with ways to automate the creation of new items. They use algorithms that the computer operates on to produce isomorphs of the "parent" items.

Bennett and Bejar also discuss computer-based scoring as it relates to construct validity evidence. They distinguish between evidence demonstrating the relationships among various

measures of the same construct (construct representation) and evidence demonstrating the relationships among different constructs (nomothetic span). Because its design requires definition and extraction of the qualitative features that characterize the responses, computer-based scoring forces consideration of the explicit relationships between test items and the various facets of the construct being assessed. This process is an important part of construct representation. Computer-based scoring also plays a role in investigations of nomothetic span. Scores on various features of the problems in CAT tests can be easily captured and used to study the relationships among various facets of dissimilar constructs.

This research report concludes by returning to some practical questions for CAT test developers that related to the generation of scores for various features of the construct being measured:

1. Which scores should be reported? The total score only? Component scores on the construct features?
2. Which of these scores must to be validated?

Upcoming Events...

**By Lance W. Seberhagen
Seberhagen and Associates
(sebe@erols.com)**

Oct 13-15
Institute for Professional Education. Seminar. "Linear and Nonlinear Regression with Applications." Washington, DC. Contact: IPE, (703) 527-8700.

Oct 17-21
International Personnel Management Association. Annual Conference. Washington, DC. Contact IPMA,

(703) 549-7100.

Oct 25-28
Linkage, Inc. Conference. "Building and Leveraging Your Organization's Intellectual Capital." Boston, MA. Contact: LI, (781) 862-3157.

Oct 27-29
Washington Business Group on Health. Annual Conference. "Disability Management." Washington, DC. Contact: WBGH, (202) 408-9320.

Oct 30-Nov 4
International Association of Chiefs of Police. Annual Conference. Charlotte, NC. Contact: IACP, (703) 836-6767.

Nov 10
PTC/MW. Luncheon Meeting. Dr. Gary Carter, PDRI, Arlington, VA. Topic to be announced. Pier 7 Restaurant, Washington, DC. Contact: Suzanne Tsacoumis, HumPRO (703) 706-5860.

Dec 6-8
Institute for Professional Education. Seminar. "Categorical Data Analysis." and "Applied Statistics." Washington, DC. Contact IPE, (703) 527-8700.

Dec 8
PTC/MW. Luncheon Meeting. Dr. Deidre Knapp, HumRRO, Alexandria, VA. "PTC/MW Presidential Address." Pier 7 Restaurant, Washington, DC. Contact: Suzanne Tsacoumis, HumPRO (703) 706-5860.

Dec 8-10
Institute for Prof. Ed. Seminar. "Linear and Nonlinear Regression with Applications." Washington, DC. Contact: IPE, (703) 527-8700.

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Dec 10-12

American Board of Assessment Psychology. Conference. "Assessment Psychology." Fort Lauderdale, FL. Contact: ABAP, (305) 372-0010 or abap.diplomate@worldnet.att.net.

2000

Mar 16-17

Personnel Decisions International. Conference. "Selection 2000." Chicago, IL. Contact: PDI, (612) 573-7883.

MAPAC Committee Chairs

Program:

Linda Dunn, Director
Examinations & Civil Service Ops
City University of New York
535 E. 80th. Street - Room 603
New York, N.Y. 10021-0767
(212) 794-5672

Membership:

Beth Risser
Test Development Division
Penn. State Civil Service
Commission
P.O. Box 569
Harrisburg, PA 17108-0569
(717) 787-1878, ext. 3525

Publications:

Elizabeth Kaido
New York State Dept. of Civil Service
The Harriman Office Campus,
Bldg. 1, Room 369
Albany, NY 12239-0001
(518) 457-8461
emk1@mail3.cs.state.ny.us

Training:

Robyn Talesnik
State Highway Administration
Recruitment and Examination
Division, Room 602
Baltimore, MD 21203-0717
(410) 545-5630
rtalesnik@sha.state.md.us

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