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# *On-Line T&Es*

## *A Better Mousetrap?*



**IPMAAC**

**Orlando, Florida**

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**Paul D. Kaiser**

**NYS Department of Civil  
Service**

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# ***Department of Civil Service***

## ***Provides***

- ❖ **Merit System Administration**
- ❖ **Human Resource Management**
- ❖ **Technical Assistance**

## ***To***

- ❖ **70 State Agencies**
  - ❖ **105 Local Municipalities**
-



## ***Examination Services (2003-4)***

|                  |                                      |
|------------------|--------------------------------------|
| <b>823</b>       | <b>State exams held</b>              |
| <b>4,523</b>     | <b>Local exam requests processed</b> |
| <b>116,000 +</b> | <b>Applications for state exams</b>  |
| <b>91,000+</b>   | <b>Local scheduled candidates</b>    |
| <b>5,000</b>     | <b>Written tests scored</b>          |
| <b>463</b>       | <b>Non-written tests scored</b>      |
| <b>31,000</b>    | <b>Test questions used</b>           |



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# *Types of Tests We Do*

- ❖ multiple choice
  - ❖ written simulation exercises
  - ❖ free-answer written tests
  - ❖ structured interviews
  - ❖ performance tests
  - ❖ T&E ratings
  - ❖ listening tests
  - ❖ foreign-language testing
  - ❖ video based tests
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# *Exam Service – T&Es*

## *Why/When Do T&Es?*

- ❖ highly credentialized positions
  - ❖ no written test material available
  - ❖ small candidate counts
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# *Exam Service – T&Es*

## *Point Factor Ratings*

- ❖ **degrees obtained**
  - ❖ **certifications**
  - ❖ **relevant training/CE courses**
  - ❖ **job-relevant experiences**
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# *Exam Service – T&Es*

## *Advantages*

- ❖ **standardized and ‘fair’ process**
  - ❖ **accepted when occupation is highly credentialized**
  - ❖ **easier to develop, administer and score than written tests for small candidate populations**
  - ❖ **decentralized administration**
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## ***Exam Service – T&Es***

### ***Constructed-Response Model***

- ❖ candidates provide narrative descriptions of their relevant training and experience
  - ❖ candidates submit supplemental questionnaire, resumes, attachments and notes
  - ❖ scored by raters who apply a pre-determined rating scale to information presented by candidates
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## ***Exam Service – T&Es***

### ***Constructed-Response Model***

- ❖ **substantial ‘after’ work**
  - ❖ **comparing sometimes indecipherable information to the rating scale**
  - ❖ **subject to error**
  - ❖ **can be laborious**
  - ❖ **workload dependent on # of candidates**
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# ***Exam Service – T&Es***

## ***Disadvantages***

- ❖ evidence of low validity
  - ❖ difficult to develop rating scales
  - ❖ laborious and slow rating process
  - ❖ score confounded by quality of write-up
  - ❖ verification of statements difficult
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## *Exam Service – T&Es*

### *Disadvantages result in*

- ❖ **untimely service**
  - ❖ **provisional appointments**
  - ❖ **substantial communications flow**
  - ❖ **centralized decision making**
  - ❖ **considerable test to list timeframe**
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# ***On-line T&E system - building the mousetrap***

## ***Program Goals***

- ❖ faster examination service
  - ❖ automated program
  - ❖ faster examination processing
  - ❖ maintain sound measurement procedures
    - ❖ quality not sacrificed for speed
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# *On-line T&E system - building the mousetrap*

## *System Goals*

- ❖ **construct title-specific T&E questionnaires**
  - ❖ **collect applicant responses on-line**
  - ❖ **check applicant minimum qualifications**
  - ❖ **manage applicant information**
  - ❖ **immediately score**
  - ❖ **provide lists to locals on-line**
  - ❖ **produce personalized rating sheets**
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# *On-line T&E system - building the mousetrap*

## *Structured Response Model – differences for test developers*

- ❖ changes where time spent and expertise used
  - ❖ requires more time and rigor in the front end
  - ❖ once developed process is more efficient and the workload is less dependent on # of candidates
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# *On-line T&E system - building the mousetrap*

## *Staff resistance*

- ❖ **validity concerns**
  - ❖ **previous approach satisfactory, why change?**
  - ❖ **questionnaire development workload**
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## ***On-line T&E system - building the mousetrap***

### ***Structured response model – difference for candidates***

- ❖ candidates are presented with a set of response options
  - ❖ answered via a pull-down menu or a 'check-off' box from among the options presented
  - ❖ new system parallels old process
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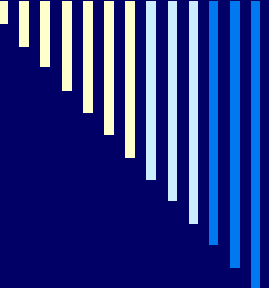
# *On-line T&E system - building the mousetrap*

## *T&E Questionnaires*

- ❖ rating based solely on questionnaire
- ❖ resume & attached info NOT considered

## *Advantages*

- ❖ more objective and consistent rating
  - ❖ reduces resources required for rating
  - ❖ produces eligible lists faster
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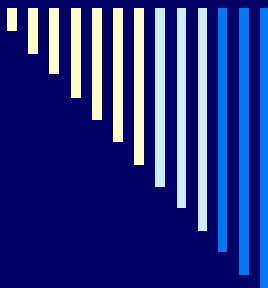
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# ***On-line T&E system – springing the mousetrap***

## ***Candidates experienced problems***

- ❖ couldn't log on (incorrectly entered SSNs)
  - ❖ browsers didn't interface properly
  - ❖ PC's set up to not accept cookies
  - ❖ if too long between responses, candidates needed to refresh
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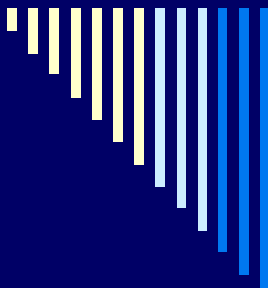
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# *On-line T&E system – springing the mousetrap*

## *Candidates experienced problems*

- ❖ candidates repeatedly ‘pressing’ submit button before records written
  - ❖ candidate review summary didn’t match input data
  - ❖ candidate received wrong score – bookmarked and resubmitted data
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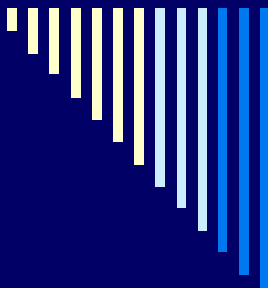


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# *On-line T&E system – springing the mousetrap*

## *Candidates delay submission*

- ❖ In 2004, >85% of Librarians waited until last two days
  - ❖ 100% submitted by last day
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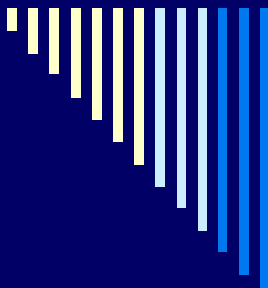


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# *On-line T&E system – springing the mousetrap*

## *Paper Copy of Questionnaire*

- ❖ **NYS law stipulates that if requested, citizens must be provided with a non-electronic copy of documents they must complete.**
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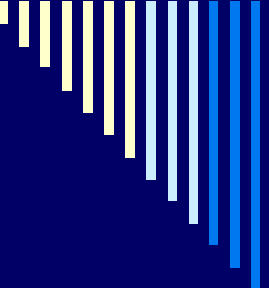


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# *On-line T&E system – springing the mousetrap*

## *Candidates' willingness to use the Web*

- ❖ optional in 2003 (Librarians)
    - ❖ 60% used web
    - ❖ 40% used hard copy
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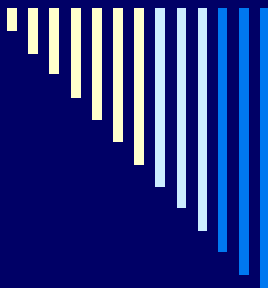
## ***On-line T&E system – tweaking the mousetrap***

***Inform candidates to log on Web site early***

- ❖ provides time to correct glitches
- ❖ allows candidates time to gather material needed to respond
- ❖ ameliorates last minute crush on help desk

***Candidates – gather ye info ere the last  
minute***

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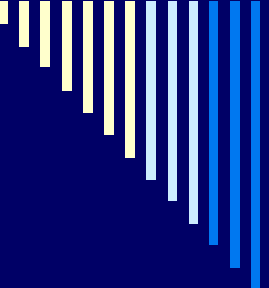
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# ***On-line T&E system – tweaking the mousetrap***

## ***Set up submission tracking system***

- ❖ **Forensic Scientist series – 56 examinations**
  - ❖ **submission period May 1 to May 31**
  - ❖ **as of May 10**
    - ❖ **204 candidates registered**
    - ❖ **29 candidates started**
    - ❖ **6 candidates completed**
-

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# ***On-line T&E system – tweaking the mousetrap***

## ***Set up a help desk***

- ❖ e-mail and phone line to answer questions
- ❖ answer technical Web interface questions only
- ❖ do not guide candidates in how to respond to content

***Don't schedule final submission date for over a weekend***

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# *On-line T&E system – a better mousetrap?*

## *Measurement Implications*

- ❖ **constructed response – difficult to verify the often ambiguous statements made by candidates**
- ❖ **structured response– gathers same information from all candidates**

*Candidates must provide a specific reference of an individual who can verify all claims*

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# *On-line T&E system – a better mousetrap?*

*Measurement Implications - verification  
of responses*

- ❖ **harder to purposefully cheat**
- ❖ **harder to unintentionally cheat**

*Agencies are responsible for verification*

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# ***On-line T&E system – a better mousetrap?***

## ***Measurement Implications***

- ❖ **constructed response– often difficult to decipher overlapping periods of full-time experience**
  - ❖ **structured response - prevents candidates from receiving credit more than once for a single period of employment**
-



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# ***On-line T&E system – a better mousetrap?***

## ***Measurement Implications***

- ❖ **constructed response– often difficult to sort out part-time work**
  - ❖ **structured response– allows applicants to receive credit for overlapping periods of acceptable part-time employment**
-



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# *On-line T&E system – a better mousetrap?*

## *Measurement Implications*

- ❖ **constructed response– much experience/training severely dichotomized in scoring**
  - ❖ **structured response– allows for easy scoring of continuous variables**
-



# *On-line T&E system – a better mousetrap?*

*Don't ask; don't tell*

- ❖ 'mandatory' in 2004 (with exception clause) - 100% used web

*Make prior responses available*

- ❖ The system allowed candidates to access responses from 2003, flood the data fields and then update the information

*Candidates loved this option!*

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# *On-line T&E system – a better mousetrap?*

## *Faster processing*

- ❖ in 2002 constructed response model used
    - ❖ time to finalize results – 4 months
  - ❖ in 2003 web model with paper submission option
    - ❖ time to finalize results – 2 months
  - ❖ in 2004 web only submission
    - ❖ time to finalize results – 8 days
-



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# *On-line T&E system – a better mousetrap?*

## *Comparative Study*

❖ **Constructed Response in 2002**

**V.**

❖ **Structured Response in 2003**

*Results approached unity*

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# *On-line T&E system – a better mousetrap?*

## *Measurement Implications*

- ❖ **constructed response– T&E laborious for more than a few candidates**
  - ❖ **structured response - program can quickly and accurately score hundreds of T&E questionnaires**
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# *On-line T&E system – the rat's tail?*

*Why no demonstrated validity for point-factor T&Es—restriction of range and other issues*

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# ***On-line T&E system – catching the right mice***

## ***The Task Force will***

- ❖ **research and design T&E models to enhance validity**
    - ❖ **behavioral consistency**
    - ❖ **task based**
    - ❖ **KSA based**
    - ❖ **achievement record**
-



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# *On-line T&E system – catching the right mice*

## *The Task Force will*

- ❖ develop 3-4 alternative T&E models
  - ❖ develop protocols for appropriate application of alternative T&E models
  - ❖ develop web delivery mechanisms
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# *On-line T&E system – catching the right mice*

## *The Task Force will*

- ❖ **set up a methodology for greater interaction with job experts during T&E development**



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# ***On-line T&E system – catching the right mice***

## ***The Task Force will***

- ❖ **develop approaches & benchmarks for evaluating the effectiveness of T&Es**
  - ❖ **determine item & test analysis methodologies for T&E responses and scores**
  - ❖ **conduct validity studies to improve the quality of subsequent holdings**
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## ***On-line T&E system – building a better trap***

### ***Library of model sections & questions***

- ❖ a library of T&E questions will become available to all examiners
  - ❖ examiners will be able to utilize questions developed for one title that are appropriate to another
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## ***On-line T&E system – building a better trap***

***T&E development & administration easier  
and more efficient***

- ❖ **the more T&E examinations moved to the system, and the more years they run, the greater the savings in professional staff time**
  - ❖ **improves the efficiency and effectiveness of the T&E examination service function**
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# ***On-line T&E system – building a better trap***

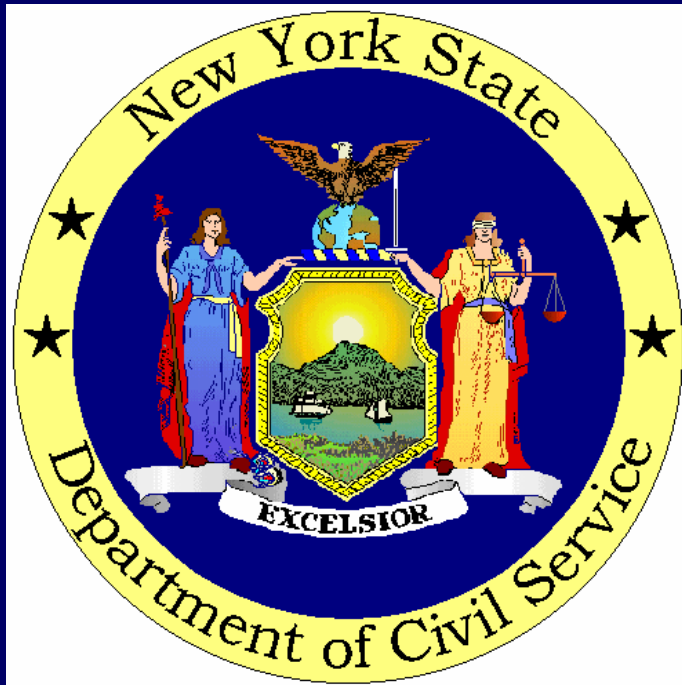
## ***Web-based T&E system***

- ❖ **T&Es with improved validity**
  - ❖ **more job expert involvement**
  - ❖ **increased staff efficiency (once structured response format is done, reiteration is like m/c test)**
  - ❖ **all T&Es web delivered**
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***Thank You***



**Paul D. Kaiser - Director  
Division of Testing Services  
New York State Department  
of Civil Service  
The State Campus  
Albany, NY 12239  
(518) 457-9499  
PDK@cs.state.ny.us**

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