

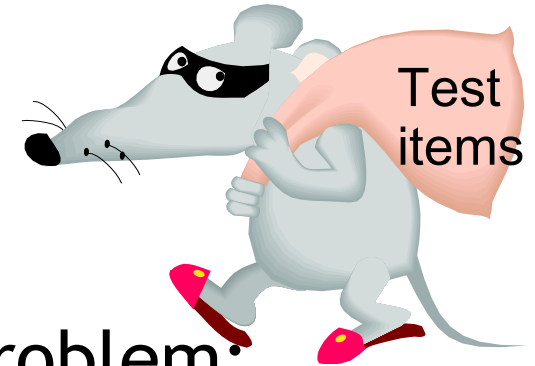


Patrolling the Web: **Who Is Selling Your Exams On The Internet?**

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Effect on Test Takers



Cheating on tests is a widespread problem:

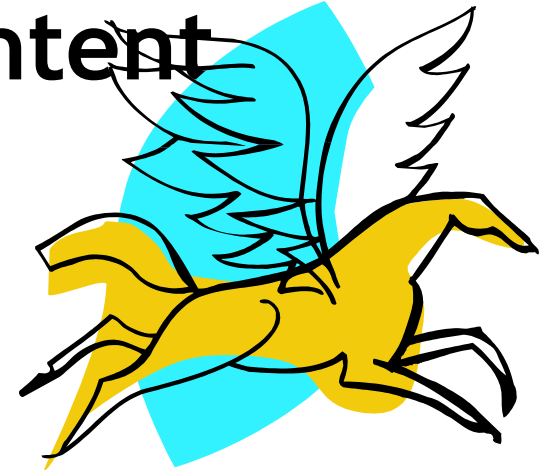
- Unfair to the honorable test takers
- Cheaters don't acquire the skills/ knowledge to perform
- Cheating threatens the viability of a testing program
- Mass cheating can degrade a marketable skill set if it is common knowledge cheating has been a problem

Effect on Certification Programs

- **Devastating:** to lose so much, so quickly
- **Discouraging:** You prepare quality exams and they are immediately stolen and disclosed?
- **Degrading:** Casts doubt on all certification and licensure programs

Myths about stolen test content

- Smaller programs *do not need* security
- Questions on the Internet *are not actual test questions*, they are low quality and always out-of-date
- Questions are *stolen only by examinees*
- Stolen questions *do not affect test scores*



ATP SI - IT Test Security Survey Results

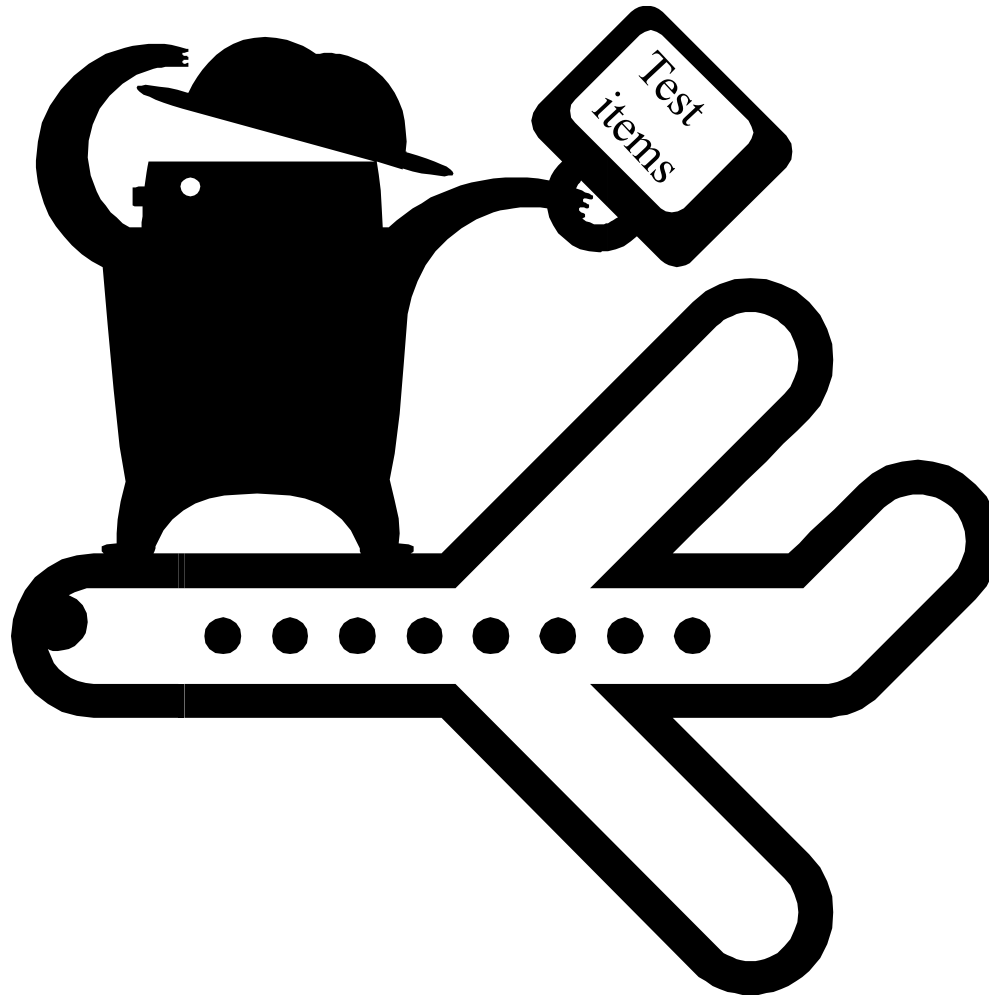
- Exam Security is a top concern for IT exam sponsors:
 - 60% reported that at least a quarter of their exams have been compromised by cheating
 - 76% reported that they are frequently affected by cheating
- Security threatened by systematic, organized, and successful efforts to steal certification exams:
 - Nearly 1/3 reported that over 60% of their exams have been stolen
 - **Over half** reported that their exams were available for sale on the internet within 3 months of publication
 - 50% found a **100% match** between the wording of stolen exams and the actual exams
- Non-IT test sponsors reported lower levels of concern about and evidence of exam threats

Who are the sellers of these stolen exams?

- Internet retailers
- Braindump sites
- Private individuals
- Test takers
- Trainers/instructors/teachers

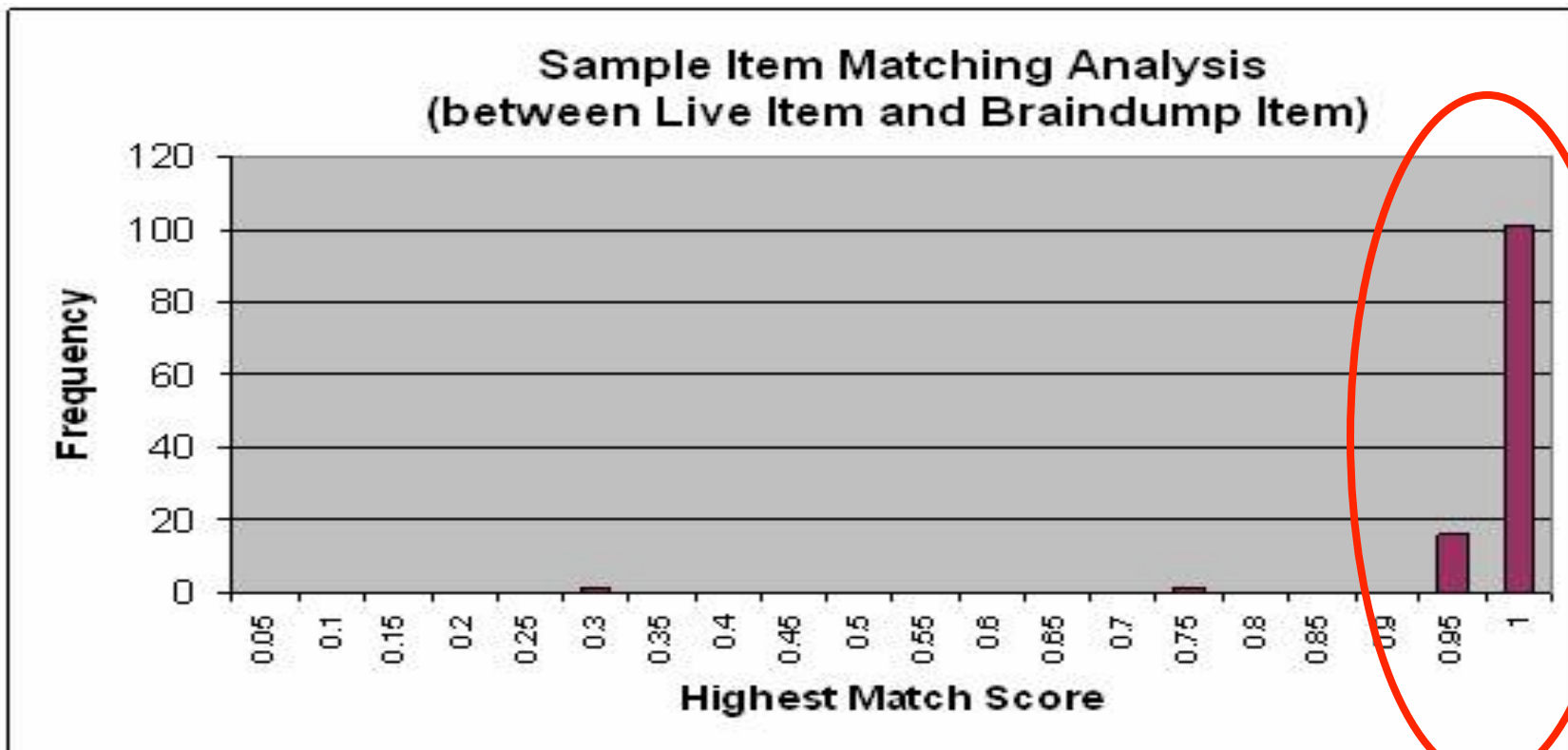


How do test items arrive on the Web?



Research on Quality of Items

- Most of the items are direct and exact matches: *Wording, Punctuation, and Even original errors*



General Research Findings

- Almost ALL questions were actual test questions from live, operational exams
- Questions of all types, including those with case studies, Flash simulations, and unique item formats
- Questions were of high-quality, edited and reviewed, and many had presentation-quality graphics

TestKing.com... One of the larger culprits

- 400 buyers purchase exams from Testking a day
- Owns over 50 braindump-related domain names
- Ownership shows up a dba in England, but actual owner is in Pakistan
- Just reached a settlement with Microsoft

Other troublesome websites...

Website	Description
Testking.com	Sells own test prep products (ie stolen items)
Pass4sure.com	Sells own test prep products
Braindumps.org	Shameless braindump site
Freelancer.com	Freelance project site
Justanswer.com	Freelance/Homework project site
Studentoffortune.com	Freelance/Homework project site
Groups.yahoo.com	Various community groups sharing info
Craigslist.com	Test prep materials, items, proxies, etc for sale
Thepiratebay.org	Public torrent
Demonoid.me	Private torrent

Web Search Basics



- ☑ Determine list of words to search on
- ☑ Use search engines to conduct searches/
send alerts
- ☑ Continuous monitoring is key
- ☑ Look in auction houses as well as sites
- ☑ Use experts to infiltrate forums and chat
rooms
- ☑ Understand the steps you'll take if you
find your items online

Caveon Client Case Study

- Searched for items on eBay
- Use key words from test items and answers
- Test items found; alert sent to eBay.co.uk
- Several requests sent to the seller
- Information taken down



Which types of programs are the most vulnerable?

- ❌ High stakes exams
- ❌ Test delivery channel with lower security requirements
- ❌ Test prep channel has infiltrated test takers
- ❌ No agreements in place with test developers
- ❌ Limited agreement in place with test takers

Reducing Item Exposure...

- Creative item development strategies
 - “Similar salient facts”
 - Seed compromised items - beginning/end
 - Continuous field testing
 - “Dynamic rescoring”
 - “Random-balanced forms”
- Foster Item Type

Remediation

- Agreements
 - Test takers
 - Test administrators
- Economic punishment, not litigation
- Possibilities
 - Withdraw tests, warn sites, provide training
 - Withhold scores, Invalidate scores, require retesting, ban or suspend from testing
- Power of publicity

What Should You Do?

- Immediately Increase Internal and Contractor Security
 - Review and assess current security measures at every level and phase of test development, distribution, proctoring, and scoring
- Identify all theft opportunities
 - Reduce access to tests
 - Monitor access to tests
 - Increase security training of staff and contractors
 - Impose severe consequences to personnel not adhering to security policies
 - Create theft-resistant security tests and items

Caveon Web Patrol

- Continual, ongoing monitoring for threats to your program
- Blends automated tools with human experts to cull the benign from real threats
- Completely outsourced solution
- “We’ve got your back”

Other Caveon Services

- Investigate Caveon's Test Security Enhancement services:
 - Security Audit/Plan
 - Item Match Analysis
 - Data Forensics

Thanks for attending!

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