



# Promise and Perils of Online Proctoring

Malcolm Hays

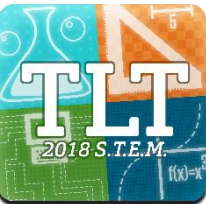
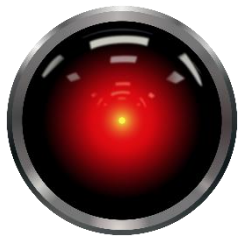
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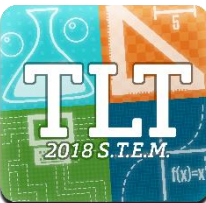
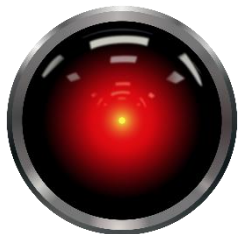
Why do you give exams?

What is the purpose of  
proctoring?



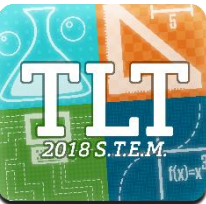
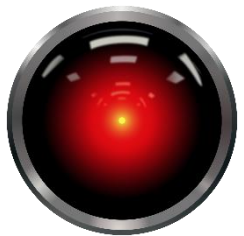
# Academic Integrity

- Literature on online courses suggest that students are likely to cheat in an online environment (Alessio, Malay, Maurer, Bailer, & Rubin, 2017).
- “The most commonly reported challenge in online assessment is how to maintain academic integrity” (Hollister & Berenson, 2009).
- Higher Education Opportunity Act of 2008
  - Accrediting agencies require distance education programs validate identity of students and provide assurances that work is completed by actual enrolled students.



# How Students Cheat

- Obtain exam questions/solutions from files (online, fraternities, etc.)
- Conspire with classmates.
- Test banks from publishers
- Collusion with proctors
- Whatever means they think they can get away with

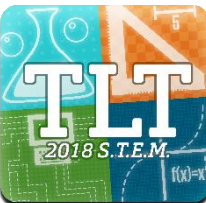
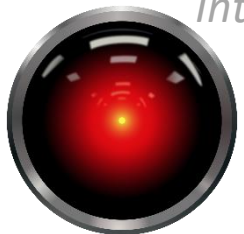


# Dependable Distributed Testing Risks

- Testing management
- Impersonator
- Computer misuse
- Forbidden stuff (unauthorized materials)
- Accomplice
- Test leakage
- Electronic warfare

***Risks can be mitigated, but NEVER eliminated!***

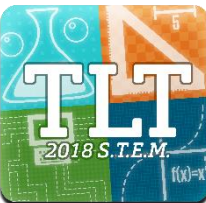
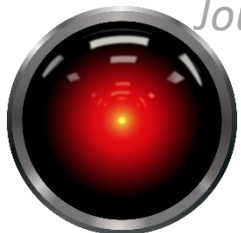
Frank, A.J. (2010). Dependable distributed testing: Can the online proctor be reliably computerized? 2010 International Conference on e-Business (ICE-B), Athens, Greece, 1-10.



# Online Exam Control Procedures

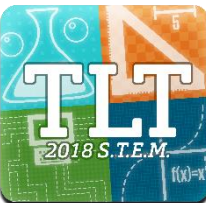
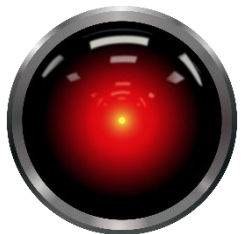
1. All students (including distance) take exam at same time.
2. Short exam accessibility.
3. Randomized questions.
4. One question at a time.
5. Exam designed to fit within allotted time.
6. One-time access to exam.
7. Lockdown browser.
8. Change exams between terms.

Cluskey, G.R., Ehlen, C.R., & Raiborn M.H. (2011). Thwarting online exam cheating without proctor supervision. *Journal of Academic and Business Ethics*, 4, 1-7.



# Online Proctoring Features

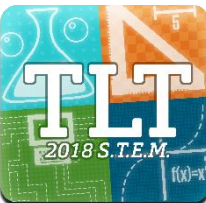
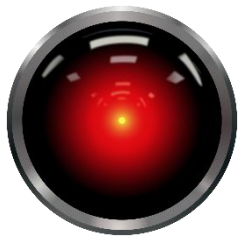
- Webcam / microphone
- Live monitoring of student/exam/test environment by remote proctor
- Secure authentication & identification
  - Username / password
  - Keystroke pattern analysis
  - Fingerprint identification
  - Photo taken next to their approved picture id (student id or driver's license).
  - Public-records questions
- Lockdown browser (optional)
- Review of exam recording by proctor / instructor



# Exam Questions for Online Proctoring

Easy question types:

- Multiple Choice, T/F, Multiple Answer
- Fill in the Blank
- Numerical Answer
- Essay / Short Answer
- Matching
- SIMPLE Formula Questions

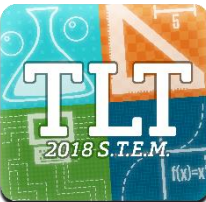
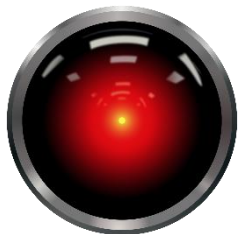




# Exam Questions for Online Proctoring

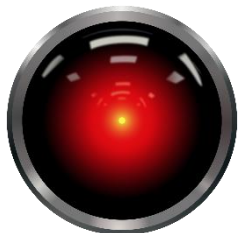
Hard question types:

- Sketches, diagrams, graphs
- “Show your work” problems
- Multiple-part questions
- Form-based questions
- File-upload questions



# Promises of Online Proctoring

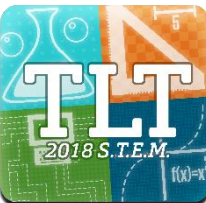
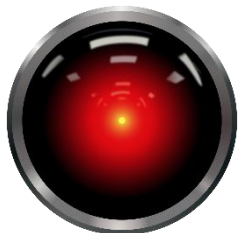
- Low-cost alternative for distance students
  - \$15-\$30 per exam based on system and length of exam
- Low burden of implementation on teachers/students
  - Students need to meet tech requirements
  - Teachers just need to create exams in online proctoring system/LMS
- May not even be required for many assessments
  - Alternatives may exist for summative/formative assessment
  - Local instructional design team can offer possible solutions
- Online proctors are
  - paid for their work
  - trained to detect cheating behaviors
  - record the entire exam session for later review



# S&T's Results with ProctorU

Since Fall 2017 (when we started with ProctorU)

- 215 sessions
- 68 exams
- 124 test takers
- 4 incidents (all flagged as “medium” priority)
- Approximate costs for FS2017: \$3,400 (with late fees)
  - Average cost per session: \$16

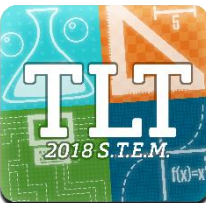
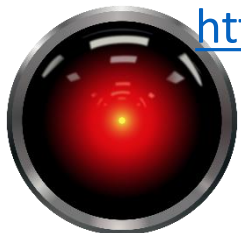


# Future of Online Proctoring

## Automated proctoring system (ProctorU Auto)

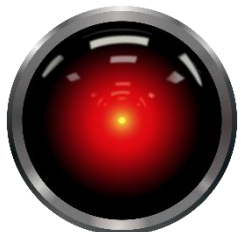
- Artificial intelligence monitors student
- Real-time alerts for suspicious behavior
- Instructor can monitor in real time
- Faster turn-around times on recordings
- No special hardware (other than webcam) required

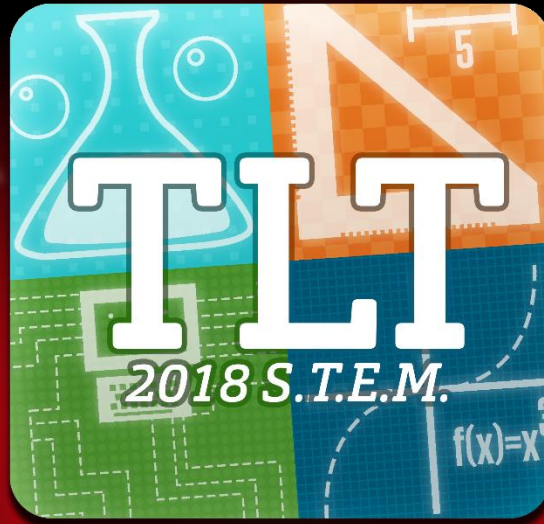
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# Questions?

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