**STP**

SURVEILLANCE TECHNOLOGY
OVERSIGHT PROJECT

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September 3, 2020

Chief Judge Janet DiFiore
New York State Court of Appeals
20 Eagle Street
Albany, NY 12207

The Honorable Brad Hoylman
Chair, Committee on Judiciary, New York State Senate
Legislative Office Building, Room 310
Albany, NY 12247

The Honorable Jo Anne Simon
Assembly Member, New York State Assembly
Legislative Office Building, Room 435
Albany, NY 12248

The Honorable Carmen Beauchamp Ciparick
Chair, New York Board of Law Examiners
Corporate Plaza Building 3
254 Washington Avenue Extension
Albany, NY 12203

Scott M. Karson, Esq.
President, New York State Bar Association
1 Elk Street
Albany, NY 12207

**Re: Support for Emergency Diploma Privileges to Practice Law in New York**

Dear Chief Judge DiFiore, Chairman Hoylman, Assembly Member Simon, Judge Ciparick, and Mr. Karson:

My name is Albert Fox Cahn, and I serve as the Executive Director of the Surveillance Technology Oversight Project ("S.T.O.P."), a New York-based privacy and civil rights group. I write to urge you to provide temporary diploma privileges for any person who is otherwise qualified for

admission to the New York bar, in lieu of the remote bar examination currently scheduled for this coming October 5th and 6th.

The New York Board of Law Examiners ("BOLE") plans to use ExamSoft's products for the remote bar exam, including Examplify, ExamID, and ExamMonitor.[1] ExamID is an identify verification product that uses facial recognition scan at the start of each of the four sessions of the bar exam. Even more invasive, ExamMonitor records examinees through their computer's camera and microphone, purporting to use artificial intelligence to detect "suspicious behavior." These forms of biometrics-driven artificial intelligence have historically proven to be biased and error prone, and ExamSoft provides examinees little reason to believe these products will fare better in October.

## I.      Facial recognition and artificial intelligence are dangerous and discriminatory.

Facial recognition is biased, error prone, and antithetical to the values of the Bar. A recent federal study found that the majority of facial recognition systems are less accurate for women and people of color.[2] Error rates were highest for Black, Asian, and Native American individuals,[3] and some systems misidentified female-presenting individuals five times more often.[4] MIT and Stanford researchers previously documented similar limitations, finding that facial recognition systems fail as much as 30 times more often for women of color than for white men.[5] Since bias factors are cumulative, an individual can face astronomical error rates.

In some cases, employers have found that facial recognition simply would not recognize Black and transgender applicants.[6] The same software has also been used by law enforcement

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[1] *FAQs for October 5-6, 2020 Remote Exam in New York*, N.Y. Bd. of Law Examiners, https://www.nybarexam.org/Docs/FAQs%20NY%20October%20Remote%20Exam_8.25.2020.pdf (last updated Aug. 25, 2020) [hereinafter *NY Bar FAQs*]; *see also ExamID Product Brochure* 2, ExamSoft, https://cdn2.hubspot.net/hubfs/2956392/Collateral/One%20Pagers/ExamSoft_ExamID.pdf (last visited Aug. 28, 2020).

[2] Patrick Grother et al., Nat'l Inst. for Standards & Tech., NISTIR 8280, *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects* 6 (2019), https://doi.org/10.6028/NIST.IR.8280.

[3] *Id.*

[4] *Id.* at 7.

[5] Sidney Fussell, *Even When Spotting Gender, Current Face Recognition Tech Works Better for White Dudes*, Gizmodo (Feb. 12, 2018, 3:50 PM), https://gizmodo.com/even-when-spotting-gender-current-face-recognition-tec-1822929750; Larry Hardesty, *Study Finds Gender and Skin-Type Bias in Commercial Artificial-Intelligence Systems*, MIT News (Feb. 11, 2018), https://news.mit.edu/2018/study-finds-gender-skin-type-bias-artificial-intelligence-systems-0212; *see also* Jacob Snow, *Amazon's Face Recognition Falsely Matched 28 Members of Congress with Mugshots*, ACLU (July 26, 2018, 8:00 AM), https://www.aclu.org/blog/privacy-technology/surveillance-technologies/amazons-face-recognition-falsely-matched-28.

[6] Olivia Rudgard, *Uber Faces Racism Claim Over Facial Recognition Software*, Telegraph (Apr. 23, 2019, 5:00 AM), https://www.telegraph.co.uk/technology/2019/04/23/uber-faces-racism-claim-facial-recognition-software; Steven Melendez, *Uber Driver Troubles Raise Concerns About Transgender Face Recognition*, Fast Company (Aug. 9, 2018), https://www.fastcompany.com/90216258/uber-face-recognition-tool-has-locked-out-some-transgender-drivers.

agencies to target undocumented communities, communities of color, and political protesters.[7] Just last month, the New York City Police Department reportedly used facial recognition to target a prominent Black Lives Matter activist.[8]

These problems are exactly why the New York State Assembly and Senate banned facial recognition in our public schools,[9] acknolwedging that the technology is completely inconsistent with effective education. But if this invasive and error-prone technology is unfit for our classrooms, how could it possibly be appropriate for examinees' bedrooms, or wherever else they can find privacy to take this exam?

Facial recognition is not unique—every form of artificial intelligence is undermined by biases. Artificial intelligence systems are shaped by countless human decisions, replicating and frequently augmenting the biases of the programmers who design the model and select its training data.[10] Even where developers seek to eliminate bias, artificial intelligence can still discriminate where algorithms improperly rely on proxies for protected characteristics.[11]

ExamSoft has released minimal information on its facial recognition and other artificial intelligence models, not even its accuracy and error rates. Examinees and members of the public have no way to evaluate the reliability of such a testing scheme or how it reflects on test-takers' fitness to practice law. And since ExamSoft first finished beta testing its monitoring software only a few months ago—and with only eight customers, at that—it is unlikely that the company has sufficient data to conduct a comprehensive quality assurance review.[12]

Even if BOLE conducts human review of all footage flagged by ExamSoft's artificial intelligence for "unusual behaviors, movements, or sounds,"[13] this review is unlikely to mitigate automated bias.[14] Moreover, reviewing footage of examinees' homes will be deeply invasive, prying

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[7] *See, e.g.*, Evan Selinger & Albert Fox Cahn, Opinion, *Did You Protest Recently? Your Face Might Be in a Database*, Guardian (July 17, 2020, 6:27 AM), https://www.theguardian.com/commentisfree/2020/jul/17/protest-black-lives-matter-database.

[8] George Joseph & Jake Offenhartz, *NYPD Used Facial Recognition Technology in Siege of Black Lives Matter Activist's Apartment*, Gothamist (Aug. 14, 2020, 7:08 PM), https://gothamist.com/news/nypd-used-facial-recognition-unit-in-siege-of-black-lives-matter-activists-apartment.

[9] Carolyn Thompson, *NY Lawmakers Vote to Pause Facial Recognition in Schools*, Associated Press (July 23, 2020), https://apnews.com/5b283de3cc0fe36eb12e34667e6deb09.

[10] *See How Explainable AI and Bias Are Interconnected*, ArthurAI (Apr. 24, 2020), https://www.arthur.ai/blog/2020/4/22/how-explainable-ai-and-bias-are-interconnected.

[11] *See id.*

[12] Riley Farrell, *ExamSoft, a Provider of Anti-Cheating Tech, Experiences Growth in an Age of Online Education*, Dall. Innovates (June 18, 2020), https://dallasinnovates.com/examsoft-a-provider-of-anti-cheating-tech-experiences-major-growth-in-an-age-of-online-education.

[13] *NY Bar FAQs*, *supra* note 1, at 5.

[14] *See* Betsy Mason, *Making People Aware of Their Implicit Biases Doesn't Usually Change Minds. But Here's What Does Work*, PBS NewsHour (June 10, 2020, 7:00 PM), https://www.pbs.org/newshour/nation/making-people-aware-of-their-implicit-biases-doesnt-usually-change-minds-but-heres-what-does-work ("Even people with the best intentions are

into their most intimate spheres of life. The risks are far from theoretical. For example, proctors for The American Board of Surgery's General Surgery Qualifying Exam reportedly contacted examinees after the exam on social media.[15]

Additionally, ExamSoft's privacy policy states that it may share data with law enforcement,[16] transforming the bar exam into a warrantless wiretap of examinees' residences. It is disturbing and deeply ironic that a cohort of lawyers will be tested on the protections against government searches at the same moment they are forced to use software that eviscerates those rights. Despite BOLE's assurance that it "will destroy and/or direct ExamSoft to destroy" collected data "within a reasonable time,"[17] ExamSoft itself acknowledges in its privacy policy that doing so may not always be possible.[18]

## II.      ExamSoft's remote proctoring software will expose examinees to identity theft.

ExamSoft collects troves of personal information, putting examinees at risk of identity theft, ransomware attacks, and other crimes.[19] For example, ExamSoft records and timestamps every keystroke, records examinees through their computers' cameras and microphones, and disables all programs on examinees' computers.[20] These features require unfettered access to critical parts of a computer's operating system.[21] Many examinees must disable antivirus software just to install and run ExamSoft's software,[22] exposing their devices and the data contained therein.[23]

Keylogging component is particularly alarming since, when combined with the need to disable antivirus software, it opens the door for malicious actors to covertly access passwords,

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influenced by [implicit biases], behaving in ways that can create disparaties in hiring practices, student evaluations, law enforcement, criminal proceedings—pretty much anywhere people are making decisions that affect others.").

[15] *See* American Board of Surgery (@AmBdSurg), Twitter (July 16, 2020, 8:31 PM), https://twitter.com/AmBdSurg/status/1283922325910491137.

[16] *Privacy Policy*, ExamSoft, https://examsoft.com/privacy-policy (last visited Sept. 2, 2020).

[17] *NY Bar FAQs*, *supra* note 1, at 5.

[18] *Privacy Policy*, *supra* note 16 ("When ExamSoft has no ongoing legitimate business need to process personal data, we will either delete or anonymize/de-identify it or, if this is not possible (for example, because the data has been stored in backup archives), then ExamSoft will securely store the personal data and isolate it from any further processing until deletion is possible.").

[19] Press Release, Ass'n for Software Testing, AST Comments on Online Exams 7, https://associationforsoftwaretesting.org/wp-content/uploads/2020/09/AST_Press_Release_on_Online_Exams.pdf.

[20] *Administer Secure Remote Exams from Any Location*, ExamSoft, https://examsoft.com/es/covid19-support (last visited Sept. 2, 2020).

[21] Press Release, *supra* note 19, at 8.

[22] *New York State Laptop Program for Uniform Bar Exam*, ExamSoft, https://ei.examsoft.com/GKWeb/login/NYUBE (last visited Sept. 2, 2020) ("You may be prompted to close any open programs and disable your antivirus program."); Press Release, *supra* note 19, at 8; *see also* Tom McMasters, *Feasibility of a Mass Online California Bar Exam: 1. Cybersecurity* 9 (2020), https://docs.google.com/document/d/1wpo5Mz9iZr003FUpXNMezGO2NNpH-Bbf9T2x4l7qHyQ.

[23] Press Release, *supra* note 19, at 8.

security credentials, and other personal information, such as stored photos and videos.[24] Again, these risks are far from theoretical. When Florida attempted to use remote proctoring software for its bar exam just month, examinees reported suspicious login attempts to their email accounts, bank accounts, and messaging applications.[25] Florida may have used a different software vendor,[26] but ExamSoft's software may be equally susceptible to the exact same attack.

These dangers may outlast the bar exam, with users frequently encountering difficulties fully uninstalling software that requires the level of system access needed for ExamSoft's products.[27] The risk to examinees is vastly increased if any of ExamSoft's components remain on a computer after the uninstallation process.

There is also the ever-present concern over a possible data breach of information stored by ExamSoft. At a minimum, ExamSoft will have copies of examinees' government identification,[28] photos, audio recordings, and video recordings. Even if ExamSoft destroys this data "within a reasonable time," as BOLE claims,[29] the risk is present for as long as this data is held.

These dangers are party of why software vendors like ExamSoft must conduct routine security audits, either internally or (preferably) by a third party. But ExamSoft provides no public information about any internal security audits, let alone independent audits like those required for information security certifications from the International Organization for Standardization[30] or the American Institute of Certified Public Accountants.[31] ExamSoft's sole data protection documentation comes from its privacy policy, which addresses the topic, in its entirety, by stating:

> ExamSoft takes reasonable precautions to protect your personal data from loss, misuse and unauthorized access, disclosure, alteration, and destruction. No method of transmission over the Internet, or method of electronic storage is 100% secure, however. Therefore, ExamSoft cannot guarantee its absolute security.[32]

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[24] *Id.*

[25] Carolina Bolado, *Fla. Bar Exam Software Sows Chaos for Grads*, Law360 (Aug. 10, 2020, 10:14 PM), https://www.law360.com/articles/1299950/fla-bar-exam-software-sows-chaos-for-grads.

[26] *Id.*

[27] Press Release, *supra* note 19, at 8.

[28] *See NY Bar FAQs*, *supra* note 1, at 3 ("At the beginning of the first mock exam for Examplify, applicants will be required to display to the web camera the same photo ID that is uploaded to BOLE. The photo must be a valid U.S. driver's license, U.S. non-driver ID or passport.").

[29] *Id.* at 5.

[30] *See, e.g.*, *ISO/IEC 27001 Information Security Management*, Int'l Org. for Standardization, https://www.iso.org/isoiec-27001-information-security.html (last visited Sept. 2, 2020).

[31] *See System and Organization Controls: SOC Suite of Services*, Am. Inst. of Certified Pub. Accountants, https://www.aicpa.org/SOC (last visited Sept. 2, 2020).

[32] *Privacy Policy*, *supra* note 16.

## III.  Conclusion

COVID-19 presents unprecedented challenges and requires innovative solutions. But innovation must be equitable, just, and consistent with the values of our profession. A bar exam that forces our future colleagues to use invasive and unproven technology, relinquish their fundamental rights, endangers their finances and privacy, and potentially endure discrimination is antithetical to everything the law is meant to uphold. But keeping recent graduates in financially precarious positions until 2021 is also no answer. As a result, the only solution is to grant diploma privileges to those applicants who have satisfied all other criteria for admission. If we fail to rise to this moment, we will not only betray thousands of recent graduates in a time of unparalleled crisis—we will betray our duties as officers of the court.

Sincerely,

Albert Fox Cahn, Esq.
Executive Director