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SCHOOLS: WHERE FEWER RIGHTS ARE REASONABLE? WHY THE REASONABLENESS STANDARD IS INAPPROPRIATE TO MEASURE THE USE OF RFID TRACKING DEVICES ON STUDENTS

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I. INTRODUCTION

In an unsuccessful attempt to heighten security, schools are implementing a technology that offers access to children's personal information and minute-by-minute location. Such access is simple, for all a determined delinquent must do is identify a target school experimenting with the new safety system, pull a car up outside the building, and wait. While the car must be equipped with a radio frequency reader¹, acquiring the reader's component parts comes with relative ease by way of the Internet. The reader picks up signals pulsating from every child, capturing, tracking and recording the movements of each student inside.² Now, the information is in the able and ill-intentioned hands of a misfeator and the various uses of such information are endless.

This is possible through the use of Radio Frequency Identification (RFID) technology.³ Although not an entirely new technology, its uses

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1. See U.S. Gov't ACCOUNTABILITY OFFICE, GAO-05-551, INFORMATION SECURITY: RADIO FREQUENCY IDENTIFICATION TECHNOLOGY IN THE FEDERAL GOVERNMENT 6 (2005), available at <http://www.gao.gov/new.items/d05551.pdf> [hereinafter INFORMATION SECURITY].

2. See *infra* Part II.

3. See Declan McCullagh, *Perspective: RFID tags: Big Brother in small packages*, CNETNEWS (Jan. 13, 2003 6:26 AM), <http://news.cnet.com/2010-1069-980325.html>; See also INFORMATION SECURITY, *supra* note 1, at 6.

have recently been expanding.⁴ Most notably, preschoolers attending the George Miller III Head Start program in Richmond, California⁵ will soon be required to wear a jersey containing a sewn in RFID tag.⁶ School officials assure parents that the immense benefits of such technology will protect and monitor their children while they are under the school's watchful eye.⁷ Each RFID embedded jersey will enable the school to track the preschoolers' every movement while they are wearing the article.⁸ Schools believe that there will be no need for manual attendance records, as the tags' monitoring capability will record all aspects of attendance.⁹

However, skeptics knowledgeable about the downfalls of the technology have reason to be concerned. While the use of RFID tags suggests increased child safety,¹⁰ the actual implications show that this notion is misguided. In light of the expanding uses of RFID technology, a group known as "ethical hackers" has taken up the cause of scrutinizing this new technology. The outcome of their work has proven that RFID tags are not fool proof.¹¹ The hackers have already cracked existing RFID technology,¹² and they have exposed this information to the world.

4. See INFORMATION SECURITY, *supra* note 1, at 6; see also Reepal S. Dalal, *Chipping Away at the Constitution: The Increasing Use of RFID Chips Could Lead to an Erosion of Privacy Right*, 86 B.U. L. REV. 485, 488-491 (2006) (discussing the commercial and governmental uses of RFID technology).

5. See *Privacy and Safety Questions Loom Over Federal Program to Track Preschoolers*, AMERICAN CIVIL LIBERTIES UNION (Sept. 14, 2010), <http://www.aclu.org/technology-and-liberty/privacy-and-safety-questions-loom-over-federal-program-track-preschoolers>; see also Nicole Ozer, *Don't Let Schools Chip Your Kids*, BLOG OF RIGHTS (Sept. 1, 2010), <http://www.aclu.org/blog/technology-and-liberty/dont-let-schools-chip-your-kids>.

6. See Ozer, *supra* note 5; see also Mike Masnick, *California Pre-Schoolers Getting Tracking Devises*, TECHDIRT (Aug. 27 2010, 1:50 PM), <http://www.techdirt.com/articles/20100827/04101210794.shtml>.

7. See Ozer, *supra* note 5.

8. See *id.*

9. See *id.* School faculty will no longer have to keep manual records of the children because the RFID signals are sent straight to the readers strewn about the school that catalog them in their servers; *RFID Used for Student Security and Attendance Reporting*, SPRING ISD NEWS (Oct. 11, 2010), <http://www.springisd.org/default.aspx?name=t10.rfid>; see also INFORMATION SECURITY, *supra* note 1, at 6; Mary Catherine O'Connor, *RFID Takes Attendance - and Heat*, RFID JOURNAL (Feb. 16, 2005), <http://www.rfidjournal.com/article/articleview/1408/1/1/>; Kim Zetter, *School RFID Plan Gets an F*, WIRED (Feb. 10, 2005), <http://www.wired.com/politics/security/news/2005/02/66554#ixzz16oW5qjJA>.

10. See O'Connor, *supra* note 9. Although the pilot program using the InClass system was only used for attendance purposes, the system has the capability of locating students all over campus.

11. See Nicole A. Ozer, *Rights "Chipped" Away: RFID and Identification Documents*, 2008 STAN. TECH. L. REV. 1, 3-6, available at <http://stlr.stanford.edu/pdf/ozers-rights-chipped-away.pdf>; see also Ozer, *supra* note 5 (identifying that RFID chips have been "cracked and copied" in various ways).

12. See Ozer, *supra* note 11; see also Ozer, *supra* note 5.

Through the Internet, anyone can Google¹³ a search, such as, “How to Hack an RFID” and read numerous articles on the subject.¹⁴ All that is necessary is a reader, which can be ordered from the manufacturer of the RFID chip.¹⁵ This can be made by adding an antenna to a standard RFID reader or at home with various low cost parts obtainable from the Internet.¹⁶ If the information on RFID tags can be read, and even copied to duplicate the chip, a child wearing an RFID tag could be taken off campus while a duplicate chip remains in the school.¹⁷ For example, an ethical hacker staying at a hotel explained how he swapped the information in an RFID tag to a carton of cream cheese with the information contained in a guest room entry card.¹⁸ He hacked into the RFID chip on the room key, copied the information from the key card onto his computer, and uploaded the key card data onto an RFID chip on a box of cream cheese.¹⁹ He jokingly “opened [his] hotel room with the cream cheese!”²⁰

Someone with enough knowledge of RFID technology can rig up a personal RFID reader and transmit all the information within a certain radius from a tag to a personal computer.²¹ A person can sit outside a school and upload all the information of the children inside without the

13. GOOGLE, <http://www.google.com/> (last visited Sept 27, 2010). Google is an online website used to search for other webpages on the Internet.

14. Many websites explain the relative ease in which to access and read information embedded on an RFID passport chip. See *How to Hack the RFID Passport Chip*, KENSAVAGE.COM, <http://www.kensavage.com/archives/rfid-hacking/> (last visited Sept. 26, 2010); See also *How to hack RFID-enabled credit cards for \$8*, BOINGBOINGTV (Mar. 19, 2008, 12:20 AM), <http://tv.boingboing.net/2008/03/18/how-to-hack-an-rfide.html> ; Tarandeep Singh, *E-Passports Hacked using RFID*, TARANFX.COM (July 20, 2009), <http://www.taranfx.com/e-passports-are-insecure-how-to-hack-rfid-e-passports>; Ross Mayfield, *RFID Hacks*, ROSS MAYFIELD'S WEBLOG (Aug. 11, 2003), http://ross.typepad.com/blog/2003/08/rfid_hacks.html.

15. See *infra*, Part II(A)(1).

16. See *How to Hack the RFID Passport Chip*, *supra* note 14.

17. See generally Ozer *supra* note 11.

18. See Annalee Newitz, *The RFID Hacking Underground*, WIRED, http://www.wired.com/wired/archive/14.05/rfid_pr.html (last visited Nov. 27, 2010). The author interviewed German security expert, Lukas Grunwald, about hacking into the chips. *Id.* Grunwald showed the author how to easily hack into the chips information and duplicate the data onto another chip. He explained that he liked to pull pranks with the chips. *Id.*

19. See *id.*

20. See *id.*

21. RegisterDanGoodin, *Cloning Passport Card RFIDs in Bulk For Under \$250*, YOUTUBE, (Jan. 20, 2009), <http://www.youtube.com/watch?v=9isKnDiJNPK>. The video is shot of “ethical hacker” Chris Paget. *Id.* He walks the viewer through how he made a homemade RFID reader from parts he bought off of ebay and hooked up in the back of his car. *Id.* He explains that he is able to gather information about U.S. passports in the area on his computer and duplicate the information. *Id.*

school faculty, parents, or children knowing otherwise.²² Obviously, children may become exposed to tracking, stalking, and abduction,²³ however, there are additional issues about what young and impressionable children will learn from being required to adorn RFID tags.²⁴

Although unanswered questions regarding the incorporation of technology into schools remain,²⁵ the precedent for litigating an unreasonable search and seizure in the public school setting has been laid by case law. The Supreme Court of the United States has examined the issue of searches and seizures in schools, and in a 1985 case²⁶ reduced the standard set forth in the Fourth Amendment, making it far more facile for schools to search students. Therefore, as it currently stands, if, and when, an issue comes before the judiciary regarding the use of RFID tracking devices in schools, the respective court will likely be deferential to the schools, as the standard applied is substantially forgiving.²⁷

The outcome of affirming a school's use of this technology has dire consequences. The use of RFID tracking devices in schools violates the privacy rights of children, implicates the safety of children, and has the long term effect of frustrating the education of this country's youth in becoming knowledgeable about their rights to privacy. Thus, the Supreme Court of the United States, when faced with a question of the constitutionality of the use of RFID tags in schools, should reinstate the more stringent probable cause standard explicitly stated in the Constitution.

In order to understand the true urgency of this issue, Part II will explain the background of RFID technology. Specifically, this section will explain what RFID tags are, how they are used, their purposes, and how they have become unsafe. Thereafter, this section will explain the rea-

22. See RegisterDanGoodin, *supra* note 21; see also Ozer, *supra* note 5.

23. See Ozer, *supra* note 5.

24. Letter from Nicole Ozer, Technology & Civil Liberties Policy Director, American Civil Liberties Union., to Don Hagland, Brittan Board of Trustees (Feb. 3, 2005), available at http://w2.eff.org/Privacy/Surveillance/RFID/schools/ACLU_EFF_EPIC_letter.pdf. Other concerns are that the information collected from the RFID technology will not be secure from other people and will teach children the wrong lessons. *Id.*

25. Ozer, *supra* note 5. The American Civil Liberties Union stated that the Richmond school using RFID technology has left them with more questions than answers:

1. What security measures are in place on the RFID chips?
2. How will data collected from the chips be used? How long will it be kept?
3. Were parents given a choice whether or not to have their child "chipped"?
4. Were parents told how RFID technology works, what the privacy and security risks are, and what the school has done to make sure the chips are secure and compliant with student privacy laws?
5. Did the County consider these questions before they received a federal grant for this program?

26. *New Jersey v. T.L.O.*, 469 U.S. 325 (1985).

27. *Id.* at 341-342.

sons that schools have implemented RFID technology as a safety precaution. Next, Part II will explain the progression of the constitutional right against unreasonable search and seizure, beginning with the Fourth Amendment's original, explicit language to its current application for students in schools. Finally, Part II will identify the reasons why schools support the reduced reasonableness standard set forth in *New Jersey v. T.L.O.* by the Supreme Court.²⁸

Part III will argue that requiring children to wear RFID tags while on school grounds infringes upon their Fourth Amendment right from unreasonable search and seizure. First, the reduced reasonableness standard set forth in *T.L.O.*²⁹ cannot be applied to RFID tracking technology in schools because the standard is far too broad to be fairly applied to RFID technology. Second, because the current reasonableness standard is unsuitable to be applied to the use of RFID tracking technology, the Court should rebalance the interests between the students and schools and readopt the probable cause standard set forth in the Constitution. Finally, Part IV will conclude that readopting the probable cause standard is the appropriate standard to be applied to the use of RFID technology in schools.

II. BACKGROUND

RFID TECHNOLOGY

RFID technology has become one of the most intriguing technologies and, at the same time, one of immense concern.³⁰ Although RFID technology use is becoming widespread, it is not a new technology.³¹

The RFID System

RFID technology utilizes radio waves to transmit information to a reader.³² The RFID system as a whole is made up of three components:

28. *See id.*

29. *See id.*

30. *See* DAVID C. WYLD, IBM CTR. FOR THE BUS. OF GOV'T, RFID: THE RIGHT FREQUENCY FOR GOVERNMENT (Oct. 2005), available at <http://www.businessofgovernment.org/sites/default/files/RFIDReport.pdf>.

31. *See* INFORMATION SECURITY, *supra* note 1. Interest in the use of radio technology use began during World War II, when radio waves were used to determine whether approaching planes belonged to allies or enemies. *Id.* Since then, radio technology saw increased popularity in commercial activities through the 1960s and evolved into marked advancements in the 1970s by companies, academic institutions, and the U.S. government. *Id.*

32. *See* David J. Warner, Note & Comment, *A Call to Action: The Fourth Amendment, the Future of Radio Frequency Identification and Society*, 40 LOY. L.A. L. REV. 853, 855 (2007); *see also* DAVID C. WYLD, IBM CTR. FOR THE BUS. OF GOV'T, RFID: THE RIGHT FREQUENCY FOR GOVERNMENT (Oct. 2005), available at <http://www.businessofgovernment.org/sites/default.files/RFIDReport.pdf>.

the RFID tag, a reading device, and the software used to process the data.³³ There are two types of RFID tags: passive and active.³⁴ Passive tags have no internal power source, and must be activated by an external source.³⁵ It has been compared to a game of “Marco Polo,”³⁶ in which the reader sends out a radio wave saying “Marco,” and the tag echoes back a response of “Polo,” replying back that specific tag’s unique response.³⁷ On the other hand, an active tag, powered by a battery source,³⁸ can send information continuously without being awakened by an outside source.³⁹ In terms of Marco Polo, an active tag continuously sends out the “Polo” message without hearing “Marco” first.⁴⁰ As new ways to utilize RFID technology are developed, the scope of where this technology will be used will continue expand.

The Different Uses of RFID Technology

RFID chips have found immense popularity in a variety of spectrums.⁴¹ Federal agencies have started using the technology for an array of purposes, such as the Environmental Protection Agency tracking radioactive materials, and the U.S. Department of Agriculture tracking animals.⁴² RFID tags are currently used in passports, building access cards, and identification cards.⁴³ They have also been used to track movements of commercial products.⁴⁴ The medical industry is exploring the use of implantable chips to manage patients as well.⁴⁵ Additionally,

33. See Warner, *supra* note 32, at 855; see also *What is RFID?*, ASS’N FOR AUTOMATED IDENTIFICATION AND MOBILITY, http://www.aimglobal.org/technologies/rfid/what_is_rfid.asp (last visited Sept. 26, 2010).

34. See INFORMATION SECURITY, *supra* note 1.(discussing that passive tags do not contain their own power source, such as a battery, and the development of these inexpensive tags has made wide-scale use of them possible for government and industry organizations); see also Warner, *supra* note 32.; Ozer, *supra* note 11.

35. See INFORMATION SECURITY *supra* note 1; see also Ozer *supra* note 11.

36. See Warner, *supra* note 32

37. *Id.*

38. See Ozer *supra* note 11.

39. *Id.*

40. Warner, *supra* note 32.

41. See INFORMATION SECURITY, *supra* note 1. Passive RFID chips are so small, easy to produce and operate for a long period of time. *Id.* Active chips have such a large range of reading capability. *Id.*). Some have called RFID tags “barcodes on steroids,” but they do much more than what a normal Universal Product Code, more commonly known as UPC, barcode does on commercial products. See also Warner, *supra* note 32.

42. See INFORMATION SECURITY, *supra* note 1; See also Ozer, *supra* note 5.

43. See Ozer, *supra* note 5.

44. See Dalal, *supra* note 4, at 486.

45. See Newitz, *supra* note 18. RFID tags are now being designed for the purpose of implantation under the skin. *Id.* The chip, which is implanted between the patient’s shoulder blades, contains a personalized code to each patient that is stored in a national database. *Id.*

RFID tags are used as human tracking systems in a Denmark children's theme park in order to allow parents to keep a closer eye on the whereabouts of their children.⁴⁶ As is evidenced, the various uses of RFID technology are widespread across many different fields, as the chips are small and easy to embed, cheap to produce, and long lasting.

Insecurity of RFID Technology

The security of RFID technology is far from perfect, and security issues have been identified.⁴⁷ Those concerned about the use of RFID technology have started to test its insecurity. In 2006, the British government issued about three million passports embedded with an RFID chip in order to heighten security in their airports.⁴⁸ For testing purposes, the passports were hacked.⁴⁹ The hackers discovered that even though the chips used high encryption technology to prevent hacking,⁵⁰ "non-secret information was . . . published in the passport to create a 'secret key.'"⁵¹ With a fairly inexpensive reader, the hackers copied the information and images onto a laptop.⁵²

RFID technology can be hacked from far distances as well. RFID chips inside U.S. passports were "cracked and copied" by a professional ethical computer hacker using a reader made from \$250 worth of parts

46. *See id.*

47. *See Ozer, supra* note 5.

48. *See* Steven Boggen, *Cracked It!*, THE GUARDIAN (Nov. 17, 2006) <http://www.guardian.co.uk/technology/2006/nov/17/news.homeaffairs>. After the terrorist attacks on the World Trade Center in New York City and the Pentagon on September 11, 2001, the International Civil Aviation Organization recommended that passports should contain facial biometrics, making it easier to identify possible terrorists. NAT'L COMM'N ON TERRORIST ATTACKS, THE 9/11 COMMISSION REPORT, *available at* <http://www.gpoaccess.gov/911/pdf/fullreport.pdf>; *See also* John D. Woodward, Jr. et al., *Biometrics: A Look at Facial Recognition*, RAND PUBLIC SAFETY AND JUSTICE 1-4 (2003) *available at* www.rand.org/pubs/docuemented_briefings/DB396/DB396.pdf. Facial biometrics is the automatic recognition of a person by their facial characteristics. It measures the spatial geometry of the face and its distinguishing features. *Id.* Facial recognition can be used from a far away distance, so it has been used to identify card counters in casinos, shoplifters in stores, and criminals and terrorists in urban areas. *Id.*)

49. Boggen, *supra* note 48 (suggesting that the RFID chips contain the passport number, the holder's date of birth, and the passport expiration date.).

50. *Id.* (discussing that military-level data-encryption standard times three and that they are using strong cryptography to prevent conversations between the passport and the reader being eavesdropped).

51. *Id.* (analogizing that it is the "equivalent of installing a solid steel front door to your house and then putting the key under the mat").

52. *Id.* (analogizing that it is the "equivalent of installing a solid steel front door to your house and then putting the key under the mat").

found on eBay.⁵³ With that reader, the hacker was able to pull up and track any passports located within the range of the reader's scope.⁵⁴

RFID chips are also used in building access cards, which are used to prevent unauthorized visitors from entering a building.⁵⁵ Building access cards that contained RFID chips were "cracked and copied" with a reader the size of a cell phone using spare parts that cost twenty dollars.⁵⁶ While the imbedded cards were intended to protect from unauthorized access to the building, the ease in which someone can access and copy the information contained on the RFID chip negates its intended use.⁵⁷

Additionally, the Federal Drug Administration approved the implantation of RFID tags, known as "VeriChip," into humans in 2004.⁵⁸ Two years later, for journalistic purposes, a journalist had a VeriChip implanted in order to test the security of the chips.⁵⁹ In two hours, the chip was implicated using an RFID reader the size of a small MP3

53. *Id.*; see also RegisterDanGoodin, *supra* note 21. On the hacker's homemade YouTube video, he identifies the different parts that make up the reader that was assembled in his car. *Id.*

54. See RegisterDanGoodin, *supra* note 21; See also Joanne Kelleher, *Got \$250? Cloning Electronic Passport Cards* (Feb. 4, 2009), available at <http://www.secureerf.com/RFID-Security-blog/?p=97>.

55. Mary Catherine O'Connor, *New Approach to RFID-Powered Building Security*, RFID JOURNAL (Oct. 5, 2006), <http://www.rfidjournal.com/article/view/2705/1>. ("Most corporate and government offices distribute these RFID-enabled cards to employees or other authorized visitors, who use them to gain access to offices or buildings, while others must check in manually. Each proximity card transmits a unique ID number that is then written to a database that provides a record of every person entering a secure facility.")

56. Ozer, *supra* note 5; see also Paul F. Roberts, *Black Hat Dispute Stirs RFID Security Awareness*, INFOWORLD (Feb. 28, 2007), http://www.infoworld.com/article/07/02/28/HN-blackhatrfid_1.html. The Director of Research and Development of a small computer security firm demonstrated how this small reader could read the personal information encoded on the RFID chips in building access cards and then copied and re-transmitted for other purposes. *Id.* This practice is called "spoofing," and it completely frustrates the purpose of having these building access cards. *Id.*

57. See Tom Sanders, *RFID Hack Hits 1 Billion Digital Access Cards Worldwide*, WEBWERELD-NETHERLANDS (Mar. 12, 2008 1:00 PM), http://www.pcworld.com/article/143371/rfidhack_hits_1_billion_digital_access_cards_worldwide.html.

58. See U.S. DEP'T OF HEALTH AND HUMAN SERVS., CTR. FOR DEVICES AND RADIOLOGICAL HEALTH, FOOD AND DRUG ADMIN., GUIDANCE FOR INDUSTRY AND FDA STAFF: CLASS II SPECIAL CONTROLS GUIDANCE DOCUMENT: IMPLANTABLE RADIOFREQUENCY TRANSPONDER SYSTEM FOR PATIENT IDENTIFICATION AND HEALTH INFORMATION (2004), available at www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm072191.pdf; see also *FDA Approves Computer Chip for Humans*, MSNBC (last updated Oct. 13, 2004 6:38:52 PM), <http://www.msnbc.msn.com/id/6237364>; Ozer, *supra* note 5.

59. Susan Kuchinskas, *The New Chip-erati: Are RFID implants geek-chic or a tool of the military industrial complex?*, THEINTERNETNEWS (Feb. 6, 2006), <http://www.internetnews.com/security/article.php/3582971/The+New+Chiperati.htm>.

player.⁶⁰ The tag was read and cloned, and once the tag was hacked, the copy could be used in the same way as the original tag was used.⁶¹

These various hacking occurrences show that RFID technology is far from being secure. As RFID technology continues to be utilized for different purposes, such as passports, building access cards, and VeriChips, more opportunities for hackers to steal information will arise.

RFID and Schools

The Use of RFID Technology in Schools

RFID technology has started to rear its head in schools with the use of tracking devices on children.⁶² In 2005, students attending Brittan Elementary School in Sutter, California were given new identification cards that, unbeknownst to the parents or students, contained RFID chips.⁶³ Students were required to wear a photo ID, containing an RFID chip around their necks.⁶⁴ The doorways in the school were equipped with an RFID reader, which sent the unique student identification number to the school's server as the student passed through the doorway.⁶⁵ The school stated that the purpose of the system was to maintain safety and discipline in the schools.⁶⁶ The system was not permanent, however.⁶⁷ There was an unanticipated outcry from parents⁶⁸ and various

60. *See id.*

61. *See id.*

62. Claire Swedberg, *RFID Watches Over School Kids in Japan*, RFID JOURNAL (Dec. 16, 2005), <http://www.rfidjournal.com/article/articleview/2050/1/1> (In 2005, Japanese school officials gave students in Yokohama City RFID tags in order to track their routes to and from school. The school used "AeroScout's T2 battery-powered RFID tags with call buttons. *Id.* The [tag] tracks the movement of children in a 2- by 2 1/2-kilometer (1.2- by 1.6-mile) area surrounding a city school." *Id.* Signals were sent once per second over the wireless network to the school.; *see also* Warner, *supra* note 32, at 857; *see also* Thomas Claburn, *UK Kids get RFID Chips in Uniforms*, INFORMATIONWEEK (Oct. 25, 2007), <http://www.informationweek.com/news/mobility/RFID/showArticle.jhtml?articleID=202601660> (Additionally in 2007, students in the United Kingdom had RFID chips placed inside their uniforms in order "to hasten registration, simplify data entry for the school's behavioral reporting system, and ensure attendance.").

63. Zetter, *supra* note 9.

64. *Id.* (discussing that identification cards are affixed to a lanyard, which contained a 15-digit number that was unique to each student. "The identification cards were part of the InClass RFID system. The system was developed by two local high school teachers in Sutter, California, who helped found the company, InCom.").

65. *Id.*

66. *Id.*

67. *Wired News Report: School Drops RFID Tag Program*, WIRED (Feb. 16, 2005), <http://www.wired.com/techbiz/media/news/2005/02/66626> (The school disabled the scanners above classroom doors and stopped not disciplining students for not wear the identification cards).

68. Zetter, *supra* note 9; Press Release, American Civil Liberties Union of Northern California, Privacy Right are at Risk- Parents and Civil Liberties Groups Urge School Dis-

civil liberty organizations.⁶⁹ Parents expressed strong opinions against the use of RFID technology, arguing that they “don’t want any child to be tracked anywhere [and] children are not pieces of inventory.”⁷⁰

Schools have also used RFID tags for other purposes.⁷¹ An Arizona University school official stated that it planned on expanding the capabilities of their RFID embedded identification system.⁷² The school planned to use the identification cards to track whether a student is present in class.⁷³ Overall, schools have started replacing their manual procedures with RFID technology without properly examining the negative consequences.

School’s Arguments

Schools have had to defend the use of RFID technology as a safety practice as questions arise over its use. They argue that the use of RFID tags in schools is supported by the need of administrators to maintain order and safety.⁷⁴ The United States Supreme Court has stated that

district to Terminate Use of Tracking Devices (Feb. 7, 2005), *available at* http://www.aclunc.org/news/press_releases/privacy_rights_are_at_risk_-_parents_and_civil_liberties_groups_urge_school_district_to_terminate_use_of_tracking_devices.shtml. Additionally, parents thought that the mandatory identification cards made it easier for someone to harm their child. *Id.*

69. American Civil Liberties Union of Northern California, *supra* note 68. Civil liberties groups sent a letter to the Brittan Board of Trustees to express support for the parents concerned about the safety of the children and detailing the civil liberties implications at risk. *Id.* The authors of the letter identified their first concern, which was the safety and security of the students because the information being broadcasted was mainly the children’s identity and location, which could be obtained by anyone with a chip reader. *Id.* They pointed out that “RFID readers [have become] cheaper and more widely available,” so the threat to students who are required to wear these badges is rapidly increasing. *Id.* The letter stated that the school was sending a “very disturbing message” to children when they track students with the same system used on cattle and dangerous criminal in high-security prisons. Dignity is “an essential component of being a human being and a condition for freedom and equality” is protected, and it is teaching children the wrong principles. *Id.*

70. *Id.*

71. Mary Catherine O’Connor, *Northern Arizona University to use Existing RFID Student Cards for Attendance Tracking*, RFID JOURNAL (May 24, 2010), <http://www.rfidjournal.com/article/view/7628>.

72. *Id.* Originally, the cards were used merely for gaining access to certain doors around the school and for charging purchases of food by a magnetic strip to their student accounts.

73. *Id.* When the students pass through the “reader-generated interrogation field” located on a doorway, the reader sends the tags’ unique ID numbers to a central server. *Id.* Software installed on the server collects the tag data and uploads a list of present, absent and tardy students to the teachers PDA. *Id.* The teacher then visually double checks what the list says with what she sees in the classroom. *Id.* That list then becomes the attendance for that day’s class. *Id.*

74. *United States v. Aguilera*, 287 F. Supp. 2d 1204, 1209 (E.D. Cal. 2003) (*citing* *New Jersey v. T.L.O.*, 469 U.S. 325, 341 (1985)). When the Court balances governmental and

this interest in maintaining order and safety is “legitimate.”⁷⁵ Because drug use and violent crime in schools have become major social problems,⁷⁶ school officials have a substantial interest, against children’s interest in privacy, in maintaining discipline in the classroom and on school grounds.⁷⁷

Larger safety concerns include, but are not limited to, the growth of school shootings,⁷⁸ child abduction,⁷⁹ bomb threats,⁸⁰ bullying,⁸¹ and fighting.⁸² Schools have been implementing new forms of security to address these issues; the use of security cameras in schools dramatically increased from nineteen percent in 1999–2000 to fifty five percent in the

privacy interests on school campuses under the Fourth Amendment, it held that it would “permit a departure from the probable cause standard to conduct searches of students because such administrators must be given the freedom to maintain order.” *Id.*

75. See T.L.O., 469 U.S. at 343. While the Court lessened the standard, it stated that at the same time, “the reasonableness standard should ensure that the interests of students will be invaded no more than is necessary to achieve the legitimate end of preserving order in the schools.” *Id.*

76. Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646, 654 (1995) (*citing* New Jersey v. T.L.O., 469 U.S. 325, 339 (1985)). The Court recognized that maintaining order in the classroom has never been easy. *Id.* It then went on to point out that in recent years, school disorder has become more harsh and “ugly”, with drug use and violent crime becoming major social problems. *Id.* at 654. .

77. T.L.O., 469 U.S. at 339.

78. Greg Toppo, *10 Years Later, the Real Story Behind Colmbine*, USATODAY (Apr. 14, 2009 1:48pm), http://www.usatoday.com/news/nation/2009-04-13-columbine-myths_N.htm; see also VA. TECH REVIEW PANEL, REPORT OF THE REVIEW PANEL PRESENTED TO GOVERNOR Kaine of the Commonwealth of Virginia (2007), available at <http://www.governor.virginia.gov/TempContent/techPanelReport-docs/FullReport.pdf>; see also Henry K. Lee, *Suspect arrested in Fairfield shooting death*, SFGATE.COM (Nov. 25, 2010), http://articles.sfgate.com/2010-11-25/bay-area/24945707_1_shooting-death-shooting-at-high-school-park-ing-lot.

79. Nicole Howley, *Missing Calif. Teenager Found Dead in Moreno Valley; Murderer on the Loose*, JUSTICENEWSFLASH (July 22, 2010), http://www.justicenewsflash.com/2010/07/23/missing-calif-teenager-found-dead_201007235074.html.

80. Betty Mitchell Gray, *SHS Plagued by Bomb Threats*, WASHINGTONDAILYNEWS (Oct. 16, 2010 2:17 AM), <http://www.wdnweb.com/articles/2010/10/16/news/doc4cb8bbf3f3bf2798691929.txt>; See generally MISS. CTR. FOR SAFE SCH., DEALING WITH BOMB THREATS AT SCHOOL (2001), available at www.popcenter.org/problems/bomb_threats/PDFs?Missouri_2001.pdf.

81. Kris Turner, *Bullying Legislation Proposed After Suicides*, S.F. CHRON. (Oct. 15, 2010, 4:00 AM), <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2010/10/14/MNI91FRR72.DTL>; see also Jim Dubreuil & Eamon McNiff, *Bullied to Death in America’s Schools*, ABC NEWS (Oct. 15, 2010), <http://abcnews.go.com/2020/TheLaw/school-bullying-epidemic-turning-deadly/story?id=11880841>.

82. Annie Murphy Paul, *Fighting School Violence by Pinpointing Its Victims*, TIME (Oct. 17, 2010), <http://www.time.com/time/magazine/article/0,9171,2022709,00.html?xid=rss-mostpopular>.

2007–2008 school year.⁸³ This technology has improved schools' ability to monitor activities around the school far more efficiently than before.⁸⁴ Schools looking to further enhance safety precautions have looked to RFID technology.

Another issue RFID technology has been said to improve is efficient attendance taking.⁸⁵ Having a tracking device may help free up teachers and administrators, who previously had to manually note when children were absent.⁸⁶ By using RFID tracking technology in schools, children's locations are always mapped out, and their whereabouts are never unknown.⁸⁷ When a child is present in their appropriate classroom, the teachers become aware of this fact by looking at the RFID tag feed in the system.⁸⁸

Schools also point out that the relationship between teacher and student should be recognized as being different than that between law enforcement officers and criminal suspects.⁸⁹ The type of adversarial relationship between police and criminals rarely exists between school authorities and pupils.⁹⁰ The primary duties of school officials and teachers are the education and training of students, including personal

83. JON M. VAN DYKE & MELVIN M. SAKURAI, SEARCH & SEIZURE IN PUBLIC SCHOOL § 10:7 available at Westlaw SRCHSCHLS; Rachel Dinkes, et al., Nat'l Center for Educ. Statistics & Bureau of Justice Statistics, NCES 2010-12, NCJ 228478, Indicators of School Crime and Safety 68 (2009), J (Dec. 2009), available at <http://nces.ed.gov/pubs2010/2010012.pdf>.

84. Wendell Hutson, *Chicago Public Schools Focus on Security*, CHI. DEFENDER (Jan. 28, 2010), available at <http://www.chicagodefender.com/article-7029-chicago-public-school.html>. A former Chicago police officer working at the Chicago public schools explained that, "video surveillance is a lot more useful than guards because security guards can only be in one place at one time."; see also VAN DYKE & SAKURAI, *supra* note 83.

85. O'Connor, *supra* note 9.

86. *California Students Get Tracking Devices*, ASSOCIATED PRESS (Oct. 18, 2010, 8:42 AM), available at http://www.mercurynews.com/news/ci_15815706?nclick_check=1.

87. O'Connor, *supra* note 9; Zetter, *supra* note 9.

88. O'Connor, *supra* note 9; Zetter, *supra* note 9.

89. See *T.L.O.*, 469 U.S. at 349-50 (Powell, J., concurring). "Law enforcement officers function as adversaries of criminal suspects. These officers have the responsibility to investigate criminal activity, to locate and arrest those who violate our laws, and to facilitate the charging and bringing of such persons to trial;" *Id.*; see also Marisa Torrieri, *Fairfield County Schools Invest in Security*, NEWCANAANPATCH (Sept. 20, 2010), <http://newcanaan.patch.com/articles/fairfield-county-schools-invest-in-security-2>. The author points out that school officials value and cultivate the relationships and understandings that our adults have of the students in the building, the teachers knowing the kids, all the administrators knowing the kids, being approachable. *Id.*

90. See *T.L.O.*, 469 U.S. at 386 The Court discussed that police officers and school authorities are dissimilar because schools have no law enforcement responsibility or obligation to be familiar with the criminal laws School authorities have a layman's familiarity with the types of crimes that occur frequently in schools, such as the distribution and use of drugs, theft, and even violence against teachers as well as fellow students. *Id.*

responsibility for their welfare, as well as for their education.⁹¹ In order for teachers to carry out these duties, schools must establish discipline and order.⁹² The United States Supreme Court has determined that states have a compelling interest in assuring that its schools meet this responsibility.⁹³

It is also important for schools to take precautions to prevent lawsuits. When a student feels their rights have been violated, they have a choice of bringing a tort claim in either state or federal court.⁹⁴ The prevention of these claims by the use of RFID technology is closely related to making a diligent effort to protect the safety of the students and protecting the students should ultimately result in less parents bringing suit against schools.

91. *See id.* (citing *West Virginia State Bd. of Educ. v. Barnette*, 319 U.S. 624, 638 (1943)). “The importance of the schoolroom is that it is the first opportunity most citizens have to experience the power of government.” *Id.* Every citizen and public official, from schoolteachers to policemen and prison guards must go through school and will learn values that they will take with them throughout life. *Id.* The value of the country’s cherished ideals contained in the Fourth Amendment: “that the government may not intrude on the personal privacy of its citizens without a warrant or compelling circumstance.” *Id.*

92. *See id.* at 385.

93. *See id.* at 350.

94. *See VAN DYKE & SAKURAI, supra* note 83, § 14:3. In a state court, injured parties may bring claims for common law negligence or for a breach of a statutory duty. In a federal court, students or their relatives can attempt to sue for a violation of constitutional or statutory rights under 42 U.S.C.A. § 1983, under the special-relationship or state-created-danger theory, or (in the case of a sexual harassment situation) for a violation of their rights under Title IX of the Education Amendments of 1972, 20 U.S.C.A. sec. 1681. *Id.*; *see* 42 U.S.C. § 1983 (West, Weslaw through P.L. 111-264 (excluding P.L. 111-203, 111-257, and 111-259) approved 10-8-10). The statute states:

Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State or Territory or the District of Columbia, subjects, or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress, except that in any action brought against a judicial officer for an act or omission taken in such officer’s judicial capacity, injunctive relief shall not be granted unless a declaratory decree was violated or declaratory relief was unavailable. For the purposes of this section, any Act of Congress applicable exclusively to the District of Columbia shall be considered to be a statute of the District of Columbia. 42 U.S.C. § 1983

If a tort claim is commenced in a state court, injured parties may bring claims for common law negligence or for a breach of a statutory duty. If a student or relative brings a claim in a federal court, a claim can assert a violation of constitutional or statutory right under a § 1983 civil action for deprivation of rights, if an assertion is based on the deprivation of any right, privilege, or immunity guaranteed by the Constitution. Officials may also find tort claims brought against them or the school, such as intentional infliction of emotional distress, false imprisonment, battery, and violation to protect students from assault.

THE FOURTH AMENDMENT – RIGHT AGAINST UNREASONABLE
SEARCH AND SEIZURE

The constitutionality of RFID tags in schools has not yet come before the United States Supreme Court. However, the Court has suggested that the individual interests of schoolchildren⁹⁵ may involve protected privacy rights that are mandated by judicial interpretations of the Fourth Amendment of the United States Constitution.⁹⁶ The Fourth Amendment states:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.⁹⁷

The purpose of the Fourth Amendment is to “prevent the use of governmental force to search a man’s house, his person, his papers, and his effects. . . .”⁹⁸ The Fourth Amendment protects an individual’s justified expectation of privacy against unreasonable government intrusions,⁹⁹ guaranteeing “a zone of control around their bodies and possession that the government cannot enter without reasonable cause.”¹⁰⁰

Although the United States Supreme Court has not yet considered the privacy concerns implicated by RFID technology under the Fourth

95. See generally Warner, *supra* note 32, at 855.

96. See William A. Herbert, *No Direction Home: Will the Law Keep Pace With Human Tracking Technology to Protect Individual Privacy and Stop Geoslavery*, 2 *IS: J. L. & POL’Y FOR INFO SOC’Y* 409, 417 (2006).

97. U.S. CONST. amend. IV, § 1. The Fourth Amendment provides that: The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. *Id.*

98. See *Olmstead v. United States*, 277 U.S. 438, 463 (1928), overruled by *Katz v. United States*, 389 U.S. 347 (1967). The Court pointed out that “[t]he well-known historical purpose of the Fourth Amendment, directed against general warrants and writs of assistance, was to prevent the use of governmental force to search a man’s house, his person, his papers, and his effects, and to prevent their seizure against his will.” *Id.*; see also Warner, *supra* note 32, at 855.

99. See *Terry v. Ohio*, 392 U.S. 1, 9 (1968). The Fourth Amendment provides that “the right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated.” *Id.* The Court has always recognized that “no right is held more sacred, or is more carefully guarded, by the common law, than the right of every individual to the possession and control of his own person, free from all restraint or interference of others, unless by clear and unquestionable authority of law.” *Id.* (quoting *Union Pac. R. Co. v. Botsford*, 141 U.S. 250, 251 (1891)).

100. See Ozer, *supra* note 11, at 10.; see also *Katz*, 389 U.S. at 351.

Amendment,¹⁰¹ case law has set the parameters for the scope of the Fourth Amendment right against unreasonable search and seizure.¹⁰² In 1967, the United States Supreme Court ruled on the case, *Katz v. United States*.¹⁰³ In *Katz*, the Court reviewed the constitutionality of attaching an electronic wire-tap to the outside of a public telephone booth and overruled the prevailing *Olmstead* case.¹⁰⁴ The majority found that, contrary to the *Olmstead* ruling, the focus of determining the reasonableness of a search and seizure was on the individual's intention of keeping something private rather than what was actually exposed to the public.¹⁰⁵ The Court held that any government conduct that intrudes on a justified expectation of privacy is considered a search and seizure under the Fourth Amendment.¹⁰⁶

More notable from this case was Justice Harlan's concurrence, which expanded on the requirement of the justified expectation of privacy by setting out the test to determine whether a person alleging an invasion actually has such an expectation of privacy.¹⁰⁷ The twofold requirement in order to afford Fourth Amendment protection is that (1) a person exhibits a subjective expectation of privacy and (2) the expectation must be considered reasonable by society.¹⁰⁸ This is the test that is

101. See Dalal, *supra* note 4, at 495. (discussing that the Supreme Court has not yet reviewed an issue of the Fourth Amendment implications of the RFID technology but the constitutional limits have been highly contested).

102. See Herbert, *supra* note 96, at 417-20. (discussing the progression of cases that form the scope of Fourth Amendment protection).

103. See *Katz*, 389 U.S. at 347.

104. See *id.*; See also *Olmstead*, 277 U.S. at 456-57. In *Olmstead v. United States*, small wires were inserted into telephone lines. *Id.* The wires were inserted in the basement of a large office building and in the lines on the street, not in any residences. *Id.* The Court found that the wires were inserted without trespassing on any property of the defendant's in this case, and were thus not subject to the Fourth Amendment protection against unreasonable search and seizure. *Id.* at 456-57, 466

105. See *Katz*, 389 at 351-53. The Court refused to focus on the physical geographical areas as being subject to protection, for the Fourth Amendment protects people, not places, and the analysis is based on the personal aspects of what one seeks to preserve as private. See *id.* at 351.

106. See VAN DYKE & SAKURAI, *supra* note 82, at § 10:7; see also *United States v. Jacobsen*, 466 U.S. 109, 113 (1984) (finding that a "search" occurs when an expectation of privacy that society is prepared to consider reasonable is infringed); see also *Katz*, 389 U.S. at 361. (Harlan, J., concurring) Justice Harlan sets forth the standard for classifying a search. He stated that the answer to that question of what protection is awarded to "people" requires reference to a 'place.' The requirement, while regarding the location of the search, is twofold: "first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as 'reasonable'."; *Terry*, 392 U.S. at 9.

107. See *Katz*, 389 U.S. at 361 (Harlan, J., concurring); see also Herbert, *supra* note 96, at 417.

108. See *Katz*, 389 U.S. at 361 (Harlan, J., concurring); see also *United States v. Mehra*, 824 F.2d 297, 298 (4th Cir. 1987) (citing *Oliver v. United States*, 466 U.S. 170, 178 (1984)).

used to determine whether a search is present.¹⁰⁹

A Search Under the Fourth Amendment Must Be Reasonable

Once the presence of a justified expectation of privacy is shown, the next inquiry must be to determine the reasonableness of the search that took place. Historically, a search was unreasonable unless it was authorized by a warrant, and the warrant was issued based on a showing of probable cause.¹¹⁰ The Supreme Court has since held that certain cases do not require a warrant,¹¹¹ but the Court still requires that the probable cause threshold be met.¹¹²

Probable cause is determined in light of the totality of the circumstances.¹¹³ Generally, probable cause exists when the facts and circum-

Factors are considered as the basis for the reasonableness of this expectation, which deserve the Fourth Amendment's protection, including the intention of the framers, the uses to which the person has put a location, and societal values and understandings about areas. However, this determination involves immense issues of value, philosophy, and policy, and it is said that no set formula can consistently and precisely capture accurately. VAN DYKE & SAKURAI, *supra* note 83, § 1:5.

109. See *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

110. See *Camara v. Mun. Court of City & Cnty. of S.F.*, 387 U.S. 523, 528-29 (1967). "Except in certain carefully defined classes of cases, a search of private property without proper consent is 'unreasonable' unless it has been authorized by a valid search warrant." *Id.*; see, e.g., *Stoner v. California*, 376 U.S. 483 (1990); *United States v. Jeffers*, 342 U.S. 48 (2001); *McDonald v. United States*, 335 U.S. 451 (1949); *Agnello v. United States*, 269 U.S. 20 (1925).

111. See GEORGE L. BLUM, SEARCH AND SEIZURE OF PROPERTY OR PERSONS § 125 *available at* Westlaw AMJUR SEARCHES § 125.

An exception to the search-warrant requirement of the Fourth Amendment applies in cases in which police officers have probable cause to conduct the search or seizure, and exigent circumstances exist which make it impracticable to obtain a warrant. A warrantless search is unconstitutional unless probable cause to search exists, and the state satisfies its burden of showing that the exigencies of the situation makes a search without a warrant imperative. *Id.*

See also *Couden v. Duffy*, 446 F.3d 483, 496 (3d Cir. 2006). The search of a home without a warrant is presumptively unreasonable under the Fourth Amendment. *Id.* There are several established exceptions to the warrant requirement, however, including exigent circumstances and consent. *Id.* Regardless of whether an exception applies, a warrantless search generally must be supported by probable cause. *Id.*; *State v. Phillips*, 513 S.E.2d 568, 571 (N.C. Ct. App. 1999). The court stated that a warrantless search is unconstitutional unless (1) probable cause to search exists and (2) the State satisfies its burden of showing that the exigencies of the situation made search without a warrant imperative. *Id.*

112. See BLUM, *supra* note 111.

113. See *United States v. Muniz-Melchor*, 894 F.2d 1430, 1438 (5th Cir.), *cert. denied*, 495 U.S. 923 (1990). "The evidence in support of probable cause 'must be viewed in light of the observations, knowledge, and training of the law enforcement officers involved in the warrantless search.'" *Id.* See also *United States v. Buchner*, 7 F.3d 1149, 1154 (5th Cir. 1993); *Camara*, 387 U.S. at 534-35.

In cases in which the Fourth Amendment requires that a warrant to search be obtained, 'probable cause' is the standard by which a particular decision to search

stances within the person's knowledge – thoughts reasonably based on trustworthy information – are sufficient unto themselves to warrant a reasonable man to believe that an offense has been or is being committed.¹¹⁴ The standard has been described as “practical, fluid, flexible, easily applied, and nontechnical,”¹¹⁵ as it is a common sense test.¹¹⁶ The degree of certainty that the probable cause standard requires is that there be a fair probability that contraband or evidence of a crime will be found in the particular place being searched.¹¹⁷ Not only is the probable cause standard explicit in the Constitution, but it is also based on common sense so that people can understand its use and application.¹¹⁸

Fourth Amendment Searches Within the Context of Schools

Virtually any attempt to find or discover something that is not in the public view will be considered a search in a school.¹¹⁹ However, when

is tested against the constitutional mandate of reasonableness. To apply this standard, it is obviously necessary first to focus upon the governmental interest which allegedly justifies official intrusion upon the constitutionally protected interests of the private citizen. For example, in a criminal investigation, the police may undertake to recover specific stolen or contraband goods. But that public interest would hardly justify a sweeping search of an entire city conducted in the hope that these goods might be found. Consequently, a search for these goods, even with a warrant, is ‘reasonable’ only when there is ‘probable cause’ to believe that they will be uncovered in a particular dwelling. *Id.*

114. *See* Safford Unified Sch. Dist. No. 1 v. Redding, 129 S.Ct. 2633, 2639 (U.S. 2009). “Probable cause under the Fourth Amendment exists where the facts and circumstances within the affiant’s knowledge, and of which he has reasonably trustworthy information, are sufficient unto themselves to warrant a man of reasonable caution to believe that an offense has been or is being committed.” *Id.*; *see also* Carroll v. United States, 267 U.S. 132, 162 (1925); *Husty v. United States*, 282 U.S. 694, 700-701 (1931); *Brinegar v. United States*, 338 U.S. 160, 175-176 (1949).

115. *See* T.L.O., 469 U.S. at 364 (citing *Illinois v. Gates*, 462 U.S. 213, 232, 236, 239 (1983)). “This Court expounded at some length its view of the probable-cause standard. Among the adjectives used to describe the standard were practical, fluid, flexible, easily applied, and nontechnical.” *Id.*

116. *See id.*

117. *See* *United States v. Grubbs*, 547 U.S. 90, 95 (2006) (citing *Gates*, 462 U.S. at 238). The Court went on to discuss that:

probable-cause requirement looks to whether evidence will be found *when the search is conducted*, all warrants are, in a sense, ‘anticipatory.’ In the typical case where the police seek permission to search a house for an item they believe is already located there, the magistrate’s determination that there is probable cause for the search amounts to a prediction that the item will still be there when the warrant is executed. *Id.*

118. *Gates*, 462 U.S. at 238.

119. A search conducted by school officials is “any attempt to gain access to any item that is shielded from open public views and located in a protected place or thing.” VAN DYKE & SAKURAI, *supra* note 83, § 2:1. Examples of school searches are as follows:

1. physically examining the student’s person
2. looking through personal possessions
3. handling or feeling any closed opaque item to determine its contents

determining the reasonableness of a school search, the probable cause standard has been reduced to a mere reasonableness standard.¹²⁰ The reduction is the result of the United States Supreme Court's holding in *New Jersey v. T.L.O.*¹²¹

New Jersey v. T.L.O. – The “Reasonableness” Standard

In 1985, the Court reviewed the probable cause standard and its indicia of reasonableness in the particular setting of schools.¹²² At Piscataway High School in Middlesex County, New Jersey, after two female students were caught smoking in a bathroom in violation of the school's policy, one student challenged the search.¹²³ The Assistant Vice Principal caught the student smoking, searched her purse and noticed, among other things, a package of cigarette rolling papers.¹²⁴ Upon suspicion that the student had contraband, the Assistant Vice Principal searched the purse further and found a small amount of marijuana and other items.¹²⁵

The State of New Jersey charged the student with delinquency charges, and she moved to suppress the evidence found in her purse because it was tainted by an unlawful search conducted by the Assistant Vice Principal in violation of the Fourth Amendment.¹²⁶ However, the

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4. opening any closed opaque container
 5. prying open locked containers or possessions
 6. enlarging the view into closed or locked areas
 7. taking extraordinary steps to penetrate natural or other barriers that screen activities or possessions from open public view.

Id.

120. *See* T.L.O., 469 U.S. at 364.

121. *See generally id.*

122. *See generally id.*

123. *See id.* at 328. While meeting the Assistant Vice Principal, the student denied smoking in the bathroom and claimed that she did not smoke at all. She was then accused of lying. *Id.*

124. *See id.* The Assistant Principle was under the impression that cigarette rolling papers were closely associated to the use of marijuana. *Id.*

125. *See* T.L.O., 469 U.S. at 328. The other items included a pipe, a number of empty plastic bags, a substantial quantity of money in one-dollar bills, an index card that appeared to be a list of students who owed the student money, and two letters that implicated the student in marijuana dealing. *Id.*

126. *See id.* at 329. The Juvenile Court denied the motion to suppress, finding that “a school official may properly conduct a search of a student's person if the official has a reasonable suspicion that a crime has been or is in the process of being committed, or reasonable cause to believe that the search is necessary to maintain school discipline or enforce school policies.” *Id.* The court discussed the circumstances surrounding the search and found that the Assistant Vice Principal's initial decision to open the defendant's purse was justified because of his well-founded suspicion that a school rule was violated. *Id.* Also, the evidence of marijuana violations was in plain view, and a search was permitted to determine the nature and extent of the defendant's drug-related activities. *Id.* The Juvenile

Supreme Court of New Jersey reversed the Juvenile Court and Appellate Division's determination that the search was reasonable and ordered the suppression of the incriminating evidence found in the purse.¹²⁷ The Supreme Court of New Jersey disagreed with the Juvenile Court's conclusion that the search of the purse was reasonable.¹²⁸

Upon the State of New Jersey's petition for certiorari, the United States Supreme Court addressed the preliminary issue of whether the Fourth Amendment's prohibition of unreasonable searches and seizures extended to searches conducted by public school officials. The Court held that the Fourth Amendment did apply to public school officials.¹²⁹ The

Court held that the search was reasonable, sentencing her to one year of probation. The Appellate Division affirmed the Juvenile Court's decision. *Id.*

127. *See id.* at 330. The Supreme Court of New Jersey agreed with the Juvenile Court that a warrantless search by a school official did not violate the Fourth Amendment so long as the official "has reasonable grounds to believe that a student possesses evidence of illegal activity or activity that would interfere with school discipline and order." *Id.*

128. *See id.* at 330-31. The Supreme Court of New Jersey stated that the incriminating evidence found in the defendant's purse had no bearing on the original accusation that the student was smoking in the bathroom. *Id.* The Assistant Vice Principal's mere desire to prove that the student lied about smoking cigarettes was no justification for the search. *Id.* The possession of cigarettes did not violate school rules, and furthermore the Assistant Vice Principal's suspicion that the student possessed cigarettes was not based on any specific information that there were actually cigarettes in her purse. *Id.* The Supreme Court of New Jersey additionally pointed out that the Assistant Vice Principal simply saw the cigarette rolling papers, which he concluded were evidence of drug use, but this did not justify rummaging through the contents of the purse. *Id.*

129. In *T.L.O.* the issue before the Court was to determine the limits of the Fourth Amendment to searches by authorities in school settings, the Court explained:

Although the State had argued in the Supreme Court of New Jersey that the search of T.L.O.'s purse did not violate the Fourth Amendment, the petition for certiorari raised only the question whether the exclusionary rule should operate to bar consideration in juvenile delinquency proceedings of evidence unlawfully seized by a school official without the involvement of law enforcement officers. When this case was first argued last Term, the State conceded for the purpose of argument that the standard devised by the New Jersey Supreme Court for determining the legality of school searches was appropriate and that the court had correctly applied that standard; the State contended only that the remedial purposes of the exclusionary rule were not well served by applying it to searches conducted by public authorities not primarily engaged in law enforcement. Although we originally granted certiorari to decide the issue of the appropriate remedy in juvenile court proceedings for unlawful school searches, our doubts regarding the wisdom of deciding that question in isolation from the broader question of what limits, if any, the Fourth Amendment places on the activities of school authorities prompted us to order reargument on that question. Having heard argument on the legality of the search of T.L.O.'s purse, we are satisfied that the search did not violate the Fourth Amendment. *T.L.O.*, 469 U.S. at 325.

The Court further distinguished the conclusion held by various courts that schools officials are exempt from the dictates of the Fourth Amendment by virtue of the special nature of their authority over schoolchildren. *Id.* at 333. While the Court pointed out that some courts believe that teachers and school administrators act in loco parentis in their dealings with students, it eventually held that, in carrying out searches and other disciplinary func-

Court then proceeded to examine the reasonableness of the search.¹³⁰ The Court concluded that the standard of reasonableness for a search, when applied to any specific class of searches, required a balancing between the need to search and the resulting invasion.¹³¹

In consideration of an individual's legitimate expectation of privacy, the Court pointed out that an expectation of privacy must be one that society is prepared to recognize as legitimate, and not simply an unreasonable, or illegitimate subjective expectation of privacy.¹³² The Court concluded that both the State's assertions regarding the student's individual interests were severely flawed.¹³³ While the Court acknowledged the difficulty of maintaining discipline in public schools, it found that the situation was not so dire that the students in schools have no legitimate expectations of privacy.¹³⁴ The Court distinguished a recent case, which recognized that maintaining order in prisons is so great that prisoners retain no legitimate expectations of privacy in their cells.¹³⁵ The Court used this to discuss the substantial interests of teachers and administrators in maintaining discipline in the classroom and on school grounds.¹³⁶

tions pursuant to such policies, school officials act as representatives of the State, not merely as surrogates for the parents, and cannot claim parental immunity from the strictures of the Fourth Amendment. *Id.* at 331-33.

130. *See id.* at 337 (discussing that the underlying command of the Fourth Amendment is that searches and seizures must be reasonable, and that what is reasonable depends on the context within which a search takes place; such determination requires "balancing the need to search against the invasion which the search entails.")

131. *See id.* at 337. On one side of the balance, the Court considered the individual's legitimate expectations of privacy and personal security, and on the other, the government's need for effective methods to deal with breaches of public order. *Id.*

132. *See id.* at 338; *see also* *Hudson v. Palmer*, 468 U.S. 517, 525 (1984) (citing *Katz*, 389 U.S. at 360 (discussing that the decision of whether a prisoner's expectation of privacy in his prison cell is the kind of expectation that "society is prepared to recognize as "reasonable.").

133. *See T.L.O.*, 469 U.S. at 337. The State addressed student's privacy expectations generally, stating that "because of the pervasive supervision to which children in the schools are necessarily subject, a child has virtually no legitimate expectation of privacy in articles of personal property 'unnecessarily' carried into a school." *Id.* The State based its assertion on two factual premises, arguing that expectations of privacy are fundamentally incompatible with the maintenance of a sound educational environment and children only have a minimal interest in bringing any items of personal property into the school. *Id.*

134. *See id.*

135. *See id.* at 337-38 (citing *Ingraham v. Wright*, 430 U.S. 651, 668 (1977)). The Court stated that it could not apply those same conclusions in this case regarding children's privacy expectations for purposes of the Fourth Amendment. *Id.* (citing *Ingraham*, 430 U.S. at 668).

136. *See id.* at 339. In recent years, maintaining order in schools requires school officials to consider major social problems, like drug use and violent crime. *Id.* However, the schools that do not face those problems still must maintain a proper educational environment, which requires close supervision of children and enforcement of rules against conduct that would be perfectly permissible if undertaken by an adult. *New Id.* The Supreme Court

Next, the Court discussed how to balance the interests.¹³⁷ It stated that restrictions on public authorities' searches must be lessened when applied to schools.¹³⁸ First, it decided that the warrant requirement was unsuitable in the school environment.¹³⁹ It held that school officials do not need to obtain a warrant before searching a student who is under their authority.¹⁴⁰

Further, the Court stated that the level of suspicion of illicit activity required by officials to justify a search in schools required modification.¹⁴¹ The Court initially pointed out that the traditional standard to be applied to searches carried out without a warrant must be based upon "probable cause" to believe that a violation of the law has occurred.¹⁴² The fundamental purpose of the "probable cause" standard, however, was to determine the reasonableness of searches and seizures under the Fourth Amendment.¹⁴³ The standard could be reduced, as the Court has held that the warrant and "probable cause" requirements are not required in certain limited circumstances.¹⁴⁴

After carefully balancing the governmental and private interests, the Court found that the public interest was best served by a Fourth Amendment standard of reasonableness that stops short of probable cause.¹⁴⁵ The Court set forth a new reduced standard, which required a two-fold inquiry to determine the reasonableness of any search.¹⁴⁶ The action must be justified at its inception, and the search must be conducted within a reasonable scope of the circumstances, which must have justified the interference in the first place.¹⁴⁷

pointed out that events calling for discipline may be frequent and sometimes require immediate, effective action; thus, maintaining security and order in schools requires a certain degree of flexibility in school disciplinary procedures and a respect to the value of preserving the informality of the student-teacher relationship. *Id.*

137. *Id.* at 340.

138. *Id.*

139. T.L.O., 469 U.S. at 340 (citing *Camara v. Municipal Court*, 387 U.S. 523, 532-33) (discussing that as in other cases, the Supreme Court dispensed with the warrant requirement when "the burden of obtaining a warrant is likely to frustrate the governmental purpose behind the search," because requiring a teacher to obtain a warrant before searching a child would interfere with the maintenance of the swift and informal disciplinary procedures needed in the schools).

140. *Id.*

141. *Id.*

142. *Id.*

143. *Id.*

144. T.L.O., 469 U.S. at 340. In those cases, the reasonableness, and thus legality, of the searches and seizures did not rise to the level of probable cause. *Id.*

145. *Id.*

146. *Id.* (Harlan, J., concurring).

147. *Id.* (Harlan, J., concurring). First, the Court must consider whether the action was justified at its inception, questioning the reasonableness of the grounds for suspecting that the search would produce evidence that the student has violated or is violating either the

The Court assured that the “reasonableness standard” would neither unduly burden the school’s interest of maintaining order in schools, nor authorize unrestrained intrusions upon the privacy of schoolchildren.¹⁴⁸ Overall, the Court held that, under the lower reasonableness standard, the search was not unreasonable for Fourth Amendment purposes.¹⁴⁹

Children’s Rights under the Fourth Amendment in Schools

Even though the Constitution protects all citizens, there are certain classes of people that have limited protections.¹⁵⁰ One of those classes includes minors and, in a public school setting, the Fourth Amendment does not extend its full advantages to minors as it does to adults.¹⁵¹ It

law or the school rules. *Id.* Second, the Court must determine whether the conducted search “was reasonably related in scope to the circumstances which justified the interference in the first place. *Id.*”

148. *See id.* The Supreme Court pointed out that the reasonableness standard makes it easier on teachers and school administrators. *Id.* It also stated that the reasonableness standard should ensure that the interests of students are not unnecessarily invaded to achieve the legitimate end of preserving order in the schools. *Id.*

149. *See* T.L.O., 469 U.S. at 343-348. The Supreme Court first found that the initial search for cigarettes was reasonable. *Id.* at 345. The Assistant Vice Principal response to the allegation that the student had been smoking warranted a reasonable suspicion that she had cigarettes in her purse. *Id.* at 345. Therefore, the search was justified even though the cigarettes found were only “mere evidence” of a violation of the no-smoking rule. *Id.* Next, the discovery of the rolling papers gave rise to a reasonable suspicion that the student had marihuana in her purse as well as cigarettes. *Id.* This suspicion justified the looking further through the purse that turned up more evidence of drug-related activities. *Id.*

150. *See* *Cumbey v. Meachum*, 684 F.2d 712, 714 (10th Cir. 1982) (discussing that convicted prisoners are not entitled to the full protection of the Constitution, and the state may restrict these rights only to the extent necessary to further the correction system’s legitimate goals and policies); *see also* FRANCIS AMENDOLA, ET AL., 16A C.J.S. CONSTITUTIONAL LAW § 679 available at Westlaw CJS CONSTLAW § 679.

151. *See* *Tinker v. Des Moines Indep. Cnty. Sch. Dist.*, 393 U.S. 503, 506 (1969). In *Tinker*, the Court, in discussing children’s First Amendment rights in schools, stated that children do not “shed their constitutional rights . . . at the schoolhouse gate.” *Id.*; *see also* *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 655 (1995). The Court in *Vernonia* further found that the nature of children’s rights is based on what is appropriate for children in school. *Id.* The court pointed out instances of informality in schools. *Id.* For a student challenging disciplinary suspension, due process requires only that the teacher “informally discuss the alleged misconduct with the student minutes after it has occurred.” *Id.* (citing *Goss v. Lopez*, 419 U.S. 565, 581-582 (1975)). Public school education must prohibit the use of vulgar and offensive terms in public discourse. *Id.* (citing *Bethel Sch. Dist. No. 403 v. Fraser*, 478 U.S. 675, 683 (1986)). “Public school authorities may censor school-sponsored publications, so long as the censorship is “reasonably related to legitimate pedagogical concerns.” *Id.* (citing *Hazelwood Sch. Dist. v. Kuhlmeier*, 484 U.S. 260, 273 (1988)). “Imposing additional administrative safeguards upon corporal punishment would entail a significant intrusion into an area of primary educational responsibility.” *Id.* (citing *Ingraham v. Wright*, 430 U.S. 651, 682 (1977)).

has been reasoned that the Fourth Amendment does not protect all subjective expectations of privacy, but only those that society recognizes as "legitimate."¹⁵² Such legitimacy depends on the context of the issue at hand,¹⁵³ and while children are at school, the Court classifies them as children "who have been committed to the temporary custody of the State as schoolmaster."¹⁵⁴ While the Court has held that schools are not *in loco parentis*,¹⁵⁵ it has also emphasized, however, that the nature of a school's "custodial and tutelary" power¹⁵⁶ permits a degree of supervision and control that could not be exercised over free adults.¹⁵⁷ Even though children do not "shed their constitutional rights at the school-house gate,"¹⁵⁸ the "parental" power delegated to schools reduces stu-

152. *Id.* at 654 (citing T.L.O., 469 U.S. at 338); *see also* Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

153. *See* Vernonia Sch. Dist. 47J, 515 U.S. at 654 (citing T.L.O., 469 U.S. at 338). The Court discussed that legitimate expectations vary within each context. *Id.* The location of the privacy interest is one aspect that is considered, such as if the location is at home, at work, in a car, or in a public park. *Id.*). Expectations may also vary due to the individual's legal relationship with the state actor. *Id.* The Court in *Vernonia* discussed the *Griffin* case, when it held that although one's home is protected by the Fourth Amendment, the "supervisory relationship" between the probationer and the State justified a degree of infringement upon the probationer's privacy that would not be constitutional if applied to the public at large." *Id.* (citing *Griffin v. Wisconsin*, 483 U.S. 868, 873-75 (1987)).

154. *Id.* In the *Vernonia* Court's view, subjects of the policy are children who have been committed to the temporary custody of the State as their schoolmaster. *Id.*

155. *In loco parentis Definition*, BLACKS LAW DICTIONARY (9th ed. 2009). "Of, relating to, or acting as a temporary guardian or caretaker of a child, taking on all or some of the responsibilities of a parent." *Id.*; *see also* Vernonia, 515 U.S. at 655). The Court pointed out that it had rejected the notion that public schools exercise only parental power over their students, and thus are not subject to constitutional constraint. *Id.* Because of the compulsory nature of education laws, holding school officials *in loco parentis* was inconsistent with the Court's prior decisions treating school officials as state actors for purposes of the Due Process Clause and Free Speech Clause. *Id.*

156. *See* Vernonia Sch. Dist. 47J, 515 U.S. at 654) (citing T.L.O., 469 U.S. at 339). In distinguishing the relationship between a teacher and student from the idea of *in loco parentis*, the Court found that the nature of a school's power is custodial and tutelary. *Id.*

157. *See id.* (citing T.L.O., 469 U.S. at 339). The Court pointed out that it must permit schools to have a degree of supervision and control over children that could not normally be exercised over free adults. *Id.* "[A] proper educational environment requires close supervision of schoolchildren, as well as the enforcement of rules against conduct that would be perfectly permissible if undertaken by an adult." *Id.*

158. *See* *Tinker v. Des Moines Indep. Cnty. Sch. Dist.*, 393 U.S. 503, 506 (1969); *see also* Vernonia Sch. Dist. 47J, 515 U.S. at 655; *Morrison v. Bd. of Educ. of Boyd Cnty.*, 521 F.3d 602, 623 (6th Cir. 2008) *cert. denied*, 129 S. Ct. 1318 (2009) (quoting *Keyishian v. Bd. of Regents of Univ. of State of New York*, 385 U.S. 589, 603 (1967)). The Court stated that it was "[f]ar from dismissing the importance of free speech in the schools and that "the Supreme Court ha[d] admonished that "[t]he vigilant protection of constitutional freedoms is nowhere more vital than in the community of American schools.""; *Palmer ex rel. Palmer v. Waxahachie Indep. Sch. Dist.*, 579 F.3d 502, 507 (5th Cir. 2009) *cert. denied*, 130 S. Ct. 1055 (2010); *Bethel Sch. Dist. No. 403 v. Fraser*, 478 U.S. 675, 680 (1986).

dents' rights to a level that is appropriate for children in school.¹⁵⁹ Additionally, the Court has recognized specific reasons that certain types of school activities warrant a lesser legitimate privacy expectation.¹⁶⁰ Thus, when reviewing the reasonableness of a search, the "custodial and tutelary" power should be strongly considered.¹⁶¹

III. ANALYSIS

When presented with the issue of whether RFID tracking technology should be used on children in schools, the United States Supreme Court must reevaluate the current reasonableness test and find that the constitutional probable cause standard is the appropriate test for the following reasons. First, the Court will find that the reduced standard resulting from *T.L.O.* is far too broad to be applied to RFID technology. Second, the Court should rebalance the interests between children's expectation of privacy and schools' need to use this technology. Third and finally, the rebalancing will reveal that schools' interests are insufficient compared to the probable negative consequences to children. Those conclusions will

159. See *Vernonia Sch. Dist. 47J*, 515 U.S. at 655 (discussing that even though children do not shed their constitutional rights at the schoolhouse gate, the nature of those rights is what is appropriate for children in school).

160. See *id.* at 657. The Court pointed out that student athletes may have a lower expectation of privacy. *Id.*

School sports are not for the bashful. They require "suiting up" before each practice or event and showering and changing afterwards. Public school locker rooms, the usual sites for these activities, are not notable for the privacy they afford. The locker rooms in *Vernonia* are typical: No individual dressing rooms are provided; shower heads are lined up along a wall, unseparated by any sort of partition or curtain; not even all the toilet stalls have doors. *Id.*

As the United States Court of Appeals for the Seventh Circuit has noted, there is "an element of 'communal undress' inherent in athletic participation. *Id.* The Court further points out that by choosing to "go out for the team," student athletes voluntarily subject themselves to a degree of regulation even higher than that imposed on students generally. Compared to adults who choose to participate in a "closely regulated industry," "students who voluntarily participate in school athletics have reason to expect intrusions upon normal rights and privileges, including privacy." *Id.*; see also *Schail v. Tippecanoe Cnty. Sch. Corp.*, 864 F.2d 1309, 1318 (7th Cir.1988); *United States v. Biswell*, 406 U.S. 311, 316 (1972).

161. See *Vernonia*, 515 U.S. at 646-57 (citing *New Jersey v. T.L.O.*, 469 U.S. 325 348 (1985) (Powell, J., concurring)). Justice Powell discusses that the nature of schools should be considered. *Id.* Schools have a "custodial and tutelary" responsibility for students and children are required to partake in various physical examinations, and vaccines against various diseases. *Id.* According to the American Academy of Pediatrics, "most public schools provide vision and hearing screening and dental and dermatological checks. Others also mandate scoliosis screening at appropriate grade levels. In the 1991-1992 school year, all 50 States required public school students to be vaccinated against diphtheria, measles, rubella, and polio. Particularly with regard to medical examinations, students within the school environment have a lesser expectation of privacy than members of the population generally." *Id.*

undoubtedly show that the probable cause standard should be re-imposed, heightening the standard placed on schools considering RFID technology.

THE *T.L.O.* STANDARD CANNOT BE APPLIED TO RFID TAGS IN SCHOOLS

The standard set forth in *T.L.O.*¹⁶² is too open-ended to apply to the use of RFID tracking tags in schools, making the Fourth Amendment virtually meaningless in the school context.¹⁶³ The first inquiry – whether the action was justified at its inception – is based on whether there are reasonable grounds for suspecting that a search will produce evidence that a student has violated or is violating the law or policies of the schools.¹⁶⁴

Even if a justification was based on a hunch, most of the prospective violations, such as being late to school, would be miniscule.¹⁶⁵ A distinction must be made between violations warranting reasonable suspicion of illegal activity and activities that would interfere with the school's discipline and order.¹⁶⁶ The determination of reasonable suspicion must

162. See *T.L.O.*, 469 U.S. at 341 (citing *Terry v. Ohio*, 392 U.S. 1, 20 (1968)). The *T.L.O.* standard sets forth two questions to determine whether a search is reasonable; they are: 1) whether the action was justified at its inception, and 2) whether the search conducted was reasonably related in scope to the circumstances which justified the interference in the first place. *Id.*; see also *Brannum v. Overton Cnty. Sch. Bd.*, 516 F.3d 489 (6th Cir. 2008); *C.B. v. Sonora Sch. Dist.*, 691 F. Supp. 2d 1170, 1179 (E.D. Cal. 2010).

163. See *T.L.O.*, 469 U.S. at 385 (Stevens, J., concurring in part and dissenting in part) (pointing out that the reduction in the reasonableness standard is so open-ended that it may make the Fourth Amendment virtually meaningless in the school context and that school's authority is limited).

164. *Id.* at 326. There are reasonable grounds for suspecting that a search will uncover evidence that a student has violated or is violating either a law or rules of the school. *Id.* . . . The level of certainty that the school must meet is "sufficient probability" that the search will produce evidence. *Id.* at 346 (citing *Hill v. California*, 401 U.S. 797, 804 (1971)). "The requirement of reasonable suspicion is not a requirement of absolute certainty. Sufficient probability, not certainty, is the touchstone of reasonableness under the Fourth Amendment." This conclusion was based on the rationalization that school officials may rely on commonsense conclusions regarding human behavior. *Id.*) (citing *United States v. Cortez*, 449 U.S. 411, 418 (1981)). "Rather, it was the sort of commonsense conclusion about human behavior upon which practical people, including government officials, are entitled to rely. *Id.*

165. *Id.* at 383. ". . . [L]ike a rule that prohibits a student from being tardy, its occasional violation in a context that poses no threat of disrupting school order and discipline offers no reason to believe that an immediate search is necessary to avoid unlawful conduct, violence, or a serious impairment of the educational process." *Id.*

166. *Id.* at 382. "We are satisfied that when a school official has reasonable grounds to believe that a student possesses evidence of illegal activity or activity that would interfere with school discipline and order, the school official has the right to conduct a reasonable search for such evidence. *Id.* at 382.); see also *Camara v. Mun. Court of City & Cnty. of S.F.*, 387 U.S. 523, 536-37 (1967).

take into consideration a multitude of circumstances, including the prevalence of the problem in the school to which the search was directed, among other things.¹⁶⁷ This distinction will make it clear that, while there are certainly violations warranting a reasonable suspicion of illegal activity, there are other activities that merely interfere with the school's discipline and order and do not warrant a reduction of a child's rights.

At the time of inception, there is no doubt that schools can rightfully say that there is a "sufficient probability" that the use of RFID tracking tags will present some sort of evidence exposing an infraction that has occurred.¹⁶⁸ At this time, schools are preemptively preventing violations instead of having reasonable suspicion at all.¹⁶⁹ Even though there is "[n]o doubt good hunches would unearth much more evidence of crime on the persons of students and citizens as a whole; more is required to sustain a search."¹⁷⁰

The second requirement, addressing whether the search was reasonably related in scope to the circumstances, cannot justify the initial inference that RFID technology was needed to prevent a violation of school rules.¹⁷¹ The scope is far beyond a fair application of the schools' interest in maintaining discipline and safety. Exposing children to tracking devices throughout the school day, wherever they choose to go, is intru-

167. *Id.* at 382-83 (Stevens, J., concurring in part and dissenting in part) (quoting *In State in Interest of T.L.O. v. Engerud*, 94 N.J. 331, 346 (1983), *rev'd* 469 U.S. 325 (1985)). To determine whether school officials have reasonable grounds for a search, the reviewing court should consider a) the child's age, b) history, and c) school record, including i) the prevalence and seriousness of the problem in the school to which the search was directed, ii) the exigency to make the search without delay, and iii) the probative value and reliability of the information used as a justification for the search. *Id.* .

168. See Letter from Nicole Ozer, Technology & Civil Liberties Policy Director, American Civil Liberties Union, to Don Hagland, Brittan Board of Trustees (Feb. 3, 2005), *available* at http://w2.eff.org/Privacy/Surveillance/RFID/schools/ACLU_EFF_EPIC_letter.pdf. A portion of the letter discusses its objective to make attendance more efficient by protecting the school from audits, saving the teachers time, and enhancing school safety. *Id.* This shows that the school believes that the information received will help mend the problems the school has been faced with, including negative information about the student's activities. *Id.*

169. It is inevitable that someone will do something that violates school policy or breaks the law, so at most, the search would be based on a "hunch" that a violation will eventually show some sort of violation.

170. See *T.L.O.*, 469 U.S. at 386 (quoting *In State in Interest of T.L.O. v. Engerud*, 94 N.J. 331, 347 (1983) *rev'd* 469 U.S. 325 (1985)). "No doubt good hunches would unearth much more evidence of crime on the persons of students and citizens as a whole. But more is required to sustain a search." *Id.*

171. See *Brannum* 516 F.3d at 496.

It is a matter of balancing the scope and the manner in which the search is conducted in light of the students' reasonable expectations of privacy, the nature of the intrusion, and the severity of the school officials' need in enacting such policies, including particularly, any history of injurious behavior that could reasonably suggest the need for the challenged intrusion. *Id.*

sive and violates their justified expectation of privacy. The scope is simply too broad and covers too much ground to be an acceptable means of protecting children.

Overall, the current reduced standard of reasonableness is far too deferential to schools when applied to the very specific type of search involved in tracking students by using RFID tags.¹⁷² By rebalancing the reasonable interests of the students and the schools' objectives, it becomes clear that not only would the use of RFID technology not measure up to the "reasonableness standard," but also that this standard should not even be applied to the use of RFID tracking in schools in the first place.

The integration of RFID tags into schools should be brought before the United States Supreme Court in order to reexamine the balance between schools' need to use RFID tags to track students and the invasion of students' privacy and safety, which the search entails.¹⁷³ The outcome of balancing the interests should persuade the Court to find that applying the *T.L.O.* standard to the use of RFID tags in schools is plainly wrong. The Court will find that a grave injustice will occur to children in their developing years. The Court must revert back to applying the constitutionally based¹⁷⁴ probable cause standard to determine the reasonableness of searches conducted with the use of RFID technology in schools.

THE COURT MUST REBALANCE THE INTERESTS AND READOPT THE PROBABLE CAUSE STANDARD

Just as the majority carefully balanced the private interests of students against the school's interest in *T.L.O.*, it should reexamine those interests before allowing schools to use RFID tags on students. The outcome will show that the privacy interests of students who are subjected to tracking by RFID tags substantially outweigh schools' interest in maintaining safety and discipline.

172. See *Camara*, 387 U.S. at 536-37 (stating that "there can be no ready test for determining reasonableness other than by balancing").

173. See *Brannum*, 516 F.3d at 496. Unfortunately, there can be no ready test for determining reasonableness other than by balancing the need to search against the invasion which the search entails. *Id.*

174. See *T.L.O.*, 469 U.S. at 357-58.

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. The Court's decision jettisons the probable-cause standard—the only standard that finds support in the text of the Fourth Amendment—on the basis of its Rohrschach-like "balancing test. *Id.*

See also U.S. CONST. amend. § IV.

Students have Legitimate Interests Against the Use of RFID Tags

Schools' concerns for children are legitimate, rationally based and cannot be taken for granted.¹⁷⁵ However, those concerns cannot be enough to ignore the interests and concerns of children required to wear RFID tags in schools. These interests include the students' justified expectation of privacy,¹⁷⁶ the immensely dangerous risks to children,¹⁷⁷ the damaging message sent to children who wear RFID tracking tags during their developing years,¹⁷⁸ and the effect RFID technology will have on the reasonability of the school staff.¹⁷⁹ In rebalancing, the Court will be compelled to reapply the probable cause standard.

Students' Justified Expectation of Privacy

Students have a justified subjective expectation of privacy when in school.¹⁸⁰ Further, students who are subjected to the use of RFID tags while in school are more than justified in relying on the Fourth Amendment.¹⁸¹

When determining what justifies the expectation of privacy, the fact that the subject is a child adds a deeper layer of seriousness and sensitivity. There is a difference between any garden-variety expectation of privacy and that of a child. It is absurd to assert that, up against schools' Goliath interest of maintaining a sound educational environment, children may not claim a legitimate expectation of privacy. Schools, however, have yet to appreciate the emotional and psychological impact of searches, and this can lead officials to underestimate the immediate and long-term consequences of the invasion of privacy.¹⁸² Schools that have relied on the argument that they have a sprawling interest of maintaining order inside its walls seems only to force students into believing that they have no expectation of privacy.¹⁸³ However, wearing the authorita-

175. T.L.O., 469 U.S. at 338. The Court recognized the difficulty of maintaining discipline in public schools, but found that "the situation is not so dire that students in the schools may claim no legitimate expectations of privacy."

176. See *supra* Part III(B)(1)(a).

177. See *supra* Part III(B)(1)(b).

178. See *supra* Part III(B)(1)(c).

179. See *supra* Part III(B)(1)(d).

180. See T.L.O., 469 U.S. at 338-39. See generally Alexander C. Black, III, *Existence of Legitimate Expectation of Privacy*, 31 A.L.R.5TH 229 (Originally published in 1995); McQUILLIN THE LAW OF MUNICIPAL CORPORATIONS, PROTECTION AGAINST UNREASONABLE SEARCH AND SEIZURE, 16B McQUILLIN MUN. CORP. § 46.22.40 (3rd ed. 2011).

181. See T.L.O., 469 U.S. at 338-39.

182. See Brief for the National Association of Social Workers, et al. as Amici Curiae supporting Respondent, Safford Unified Sch. Dist. No. 1 v. Redding, 129 S.Ct. 2633 (2009).

183. See Brief for American Civil Liberties Union, et al. as Amici Curiae Supporting Respondents at 16A, New Jersey v. T.L.O., 469 U.S. 325 (1985) (No. 83-712), 1984 WL 565550.

tive “uniform” of an educator and acting as the liberator of school safety does not diminish a child’s expectation of privacy.¹⁸⁴

As the Court stated in *T.L.O.*, children are not prisoners and should not be treated as such.¹⁸⁵ The need to maintain order in schools is nowhere close to the measures required in prisons, where prisoners have no justified expectation of privacy.¹⁸⁶ Measures used in prisons are unnecessarily extensive in schools, and it cannot be believed and justified that children should be treated the same as prisoners.¹⁸⁷ Implementing RFID technology in schools is comparable to institutionalizing children in a prison. Schools are preemptively removing all expectations of privacy that children have before they have done anything to clearly justify such security. Without the proper precautions, this activity will be deemed unconstitutional.

Additionally, children’s expectation of privacy would surely be considered reasonable by society at large. Society has an immense interest in the development and upbringing of children.¹⁸⁸ The years a child is in school set the foundation for their lives as adults, and this is why children are taught from an early age about the history of this country and the rights it affords all citizens.¹⁸⁹ Children’s privacy expectation is justified under the traditional test set forth by Justice Harlan in *Katz*.¹⁹⁰

184. *See id.* (discussing that simply because a school official is wearing a theoretical “uniform” of an educator and is investigating a suspected problem in the school,” a student’s reasonable expectation of privacy is no less diminished). *Id.* at *16. A student’s expectation of privacy, considering items held inside a repository like a pocketbook, is not left outside when the student enters school. *Id.*

185. *See T.L.O.*, 469 U.S. at 337-38. The Court pointed out a case that discussed the need to maintain order in a prison is so great that prisoners retain no legitimate expectations of privacy in their cells. *Id.* at 338-39.

186. *See Cumbey v. Meachum*, 684 F.2d 712, 714 (10th Cir. 1982) (discussing that convicted prisoners are not entitled to the full protection of the Constitution, and the state may restrict these rights only to the extent necessary to further the correction system’s legitimate goals and policies); *see also* FRANCIS AMENDOLA, ET AL., 16A C.J.S. CONSTITUTIONAL LAW § 679 available at Westlaw CJS CONSTLAW § 679.

187. *T.L.O.*, 469 U.S. at 338-39. (citing *Ingraham v. Wright*, 430 U.S. 651, 668 (1977) (discussing that prisoners are not afforded the same rights as free citizens)).

188. *See Grutter v. Bollinger*, 539 U.S. 306, 331 (2003) (citing *Plyler v. Doe*, 457 U.S. 202, 221 (1982)). The Court acknowledged the “overriding importance of preparing students for work and citizenship”, and described “education as pivotal to ‘sustaining our political and cultural heritage’ with a fundamental role in maintaining the fabric of society.” *Grutter*, 539 U.S. at 331(citing *Plyler*, 457 U.S. at 221); *see also* *Brown v. Bd. of Educ.*, 347 U.S. 483, 493 (1954) (finding that education “is the very foundation of good citizenship.”); *Doe v. Kamehameha Sch./Bernice Pauahi Bishop Estate*, 470 F.3d 827, 841 (9th Cir. 2006) (pointing out that “[s]chools play a special role in the development of young citizens”).

189. *See Grutter*, 539 U.S. at 331 (citing *Plyler*, 457 U.S. at 221).

190. *See Katz*, 389 U.S. at 361(Harlan, J., concurring). The twofold requirement in order to afford Fourth Amendment protection is that (1) a person exhibits a subjective expecta-

Hackable RFID Tags Expose Children to Extreme Safety Hazards

History and studies have shown that RFID technology is far from foolproof.¹⁹¹ The information is readily available and such availability should be a large concern to the public as different entities continue to implement RFID technology into the daily lives of the citizens.¹⁹² Thus far, schools have disregarded the available information, as they still choose to implement policies that allow for testing RFID technology on students.¹⁹³ Such practices are blatantly irresponsible because, not only is it imperfect, it has been proven unreliable.¹⁹⁴ It is imperative that schools consider the inevitable danger children will be in if they are required to wear RFID tags.

As the example above demonstrates,¹⁹⁵ making a mobile, homemade RFID reader is as easy as going online, purchasing a few parts, and rigging it up in a car.¹⁹⁶ The ease with which a person may buy and assemble high strength readers should alert schools that they should steer away from exposing children to RFID technology, especially considering that schools have a duty to protect children in their custody.¹⁹⁷ As the availability of RFID technology expands, access to readers will become

tion of privacy and (2) the expectation is must be considered reasonable by society. *Id.* (Harlan, J., concurring).

191. *See, e.g.*, Newitz, *supra* note 18; Ozer, *supra* note 5; Ozer, *supra* note 11, at 3-6; Boggen, *supra* note 48; *see also* John D. Woodward, Jr. et al., *Biometrics: A Look at Facial Recognition*, RAND PUBLIC SAFETY & JUSTICE 1-4 (2003) available at www.rand.org/pubs/documented_briefings/DB396/DB396.pdf.

192. *See* Ozer, *supra* note 11, at 3-6.

193. *See* Letter from Nicole Ozer to Don Hagland, *supra* note 24 (discussing implementation of RFID technology as a test, requiring children to wear it for testing purposes).

194. *See* Ozer, *supra* note 5; *see also* Ozer, *supra* note 11, at 3-6; Boggen, *supra* note 48.

195. *See, e.g.*, Newitz, *supra* note 18; Ozer, *supra* note 5; Ozer, *supra* note 11, at 3-6; Boggen, *supra* note 48; *see also* Woodward, Jr. et al., *supra* note 48, at 4.

196. RegisterDanGoodin, *supra* note 21. The video shows "ethical hacker" Chris Paget walking the viewer through how he made a homemade RFID reader from parts he bought off of eBay and hooked up in the back of his car. *Id.* He explains that he is able to gather information about U.S. passports in the area on his computer and duplicate the information. *Id.*

197. *See* Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470, 481 (5th Cir. 1982).

When the school official acts in furtherance of his duty to maintain a safe environment conducive to education, the usual accommodation is to require that the school official have "reasonable cause" for his action. Although the standard is less stringent than that applicable to law enforcement officers, it requires more of the school official than good faith or minimal restraint. The Constitution does not permit good intentions to justify objectively outrageous intrusions on student privacy. Thus, though we do not question the good faith of the GCISD officials in their attempt to eradicate a serious and menacing drug and alcohol abuse problem, we cannot approve the program on that basis; we must examine its objective reasonableness. *Id.*

more inexpensive, and more readily available.¹⁹⁸

The effect that this will have on students is clearly shown in the example of the George Miller III Head Start program. In that program RFID tags embedded in preschoolers' jerseys have a range of 100 meters,¹⁹⁹ meaning that anyone sitting outside the school can pick up the RFID signal.²⁰⁰ To make matters worse, when the signal being emitted from a child is compromised from the outside, the school officials have no way of knowing that children's information is being shared with someone outside the school.

Hackers have the option of either tracking children in school or duplicating their tags with the ability to pick up the signal from ranges outside the school.²⁰¹ If a child is tracked by someone other than the school, then someone is able to know that child's whereabouts at all times.²⁰² There are serious safety concerns as to what someone may do with this information.²⁰³

Another option available to hackers when they have gained access to the RFID tags is that they may duplicate the tag.²⁰⁴ As demonstrated by "ethical hackers,"²⁰⁵ information on an RFID tag may be duplicated and the information placed on an identical tag; the difference between the

198. After purchasing a market reader or assembling a homemade device, someone can simply drive out in front of a school, where the reader can pick up any signal inside the school. In fact, depending on the strength of the RFID tag, people attempting to pick up a signal may have an increased range in which the signal can be detected and intercepted. See *Frequently Asked Questions*, RFID JOURNAL, <http://www.rfidjournal.com/faq/18/69> (last visited Oct. 18, 2010). There really is no such thing as a "typical" RFID tag, and the read range of passive tags depends on many factors: the frequency of operation, the power of the reader, interference from other RF devices and so on. *Id.* In general, low-frequency tags are read from a foot (0.33 meter) or less. *Id.* High-frequency tags are read from about three feet (1 meter) and UHF tags are read from 10 to 20 feet. *Id.* Where longer ranges are needed, such as for tracking railway cars, active tags use batteries to boost read ranges to 300 feet (100 meters) or more. *Id.*

199. See *More On "Chipping" (RFID) School Children*, CFC EDUCATION FOUNDATION (Sept 9, 2010) <http://consumercal.blogspot.com/2010/09/more-on-chipping-rfid-school-children.html>.

200. See *id.*

201. See Ozer, *supra* note 11, at 5.

202. See generally INFORMATION SECURITY, *supra* note 1, at 6.

203. They could wait outside until they know the child is leaving school and then abduct them. They also may keep logs of the usual route of a child and plan a calculated attack. Also, depending on the schools' policy, if children are required to keep the item with the imbedded RFID tag when they leave the school, someone may track them outside the school's campus and into the public. For children who walk home from school or walk home from the bus this leaves them susceptible to danger.

204. Newitz, *supra* note 18.

205. See Elizabeth Montalbano, *DoD Approves Ethical Hacker Certification*, INFORMATIONWEEK (Mar. 2, 2010, 1:31 PM), <http://www.informationweek.com/news/government/security/223101209>; see also Ozer, *supra* note 11, at 3-6; Ozer, *supra* note 5.

two is undetectable.²⁰⁶ If a student's tag is hacked in this way, the school is unable to differentiate between the real and the fake tag.²⁰⁷ A school's means of identifying the student is through the information that the RFID reader picks up from the tag.²⁰⁸ If the information in an identical tag is detected, the school would never know. It is easy for someone attempting an abduction to place the tag in another location around the area of the school and abduct the child right out from under the school's watch.

For schools to blatantly disregard safety hazards opens them up to enormous liability. Requiring children to wear such insecure technology allows hackers access to students with unbelievably more ease than ever before. The fact that children's safety may be in jeopardy cannot be ignored for it directly contradicts the purpose of this technology: to protect children. Thus, RFID technology is not only creating more safety risks, but rendering the safety precaution absolutely useless.

The Use of RFID Technology is Sending Children a Damaging Message

Schools are establishments of education, where children go to learn how to become a part of the community and society at large.²⁰⁹ "Schools are places where we inculcate the values essential to the meaningful ex-

206. See Newitz, *supra* note 18.

207. See *id.*

208. See, e.g., INFORMATION SECURITY, *supra* note 1, at 4; see also Warner, *supra* note 32, at 855; Wyld, *supra* note 30.

209. See Plyler v. Doe, 457 U.S. 202, 221 (1982).

Public education is not a 'right' granted to individuals by the Constitution. (citation omitted). But neither is it merely some governmental 'benefit' indistinguishable from other forms of social welfare legislation. Both the importance of education in maintaining our basic institutions, and the lasting impact of its deprivation on the life of the child, mark the distinction. The 'American people have always regarded education and [the] acquisition of knowledge as matters of supreme importance.' (citation omitted). We have recognized 'the public schools as a most vital civic institution for the preservation of a democratic system of government,' (citation omitted), and as the primary vehicle for transmitting 'the values on which our society rests.' (citation omitted). As . . . pointed out early in our history, . . . some degree of education is necessary to prepare citizens to participate effectively and intelligently in our open political system if we are to preserve freedom and independence. (citation and quotations omitted). And these historic 'perceptions of the public schools as inculcating fundamental values necessary to the maintenance of a democratic political system have been confirmed by the observations of social scientists.' (citation omitted). In addition, education provides the basic tools by which individuals might lead economically productive lives to the benefit of us all. In sum, education has a fundamental role in maintaining the fabric of our society. We cannot ignore the significant social costs borne by our Nation when select groups are denied the means to absorb the values and skills upon which our social order rests. *Id.*

See also San Antonio Ind. Sch. Dist. v. Rodriguez, 411 U.S. 1, 35 (1973); Meyer v. Nebraska, 262 U.S. 390, 400 (1923); Abington Sch. Dist. v. Schempp, 374 U.S. 203, 230 (1963) (Brennan, J., concurring); Wisconsin v. Yoder, 406 U.S. 205, 221 (1972).

ercise of rights and responsibilities by a self-governing citizenry.”²¹⁰ Children must be taught that there are never stupid questions; they must learn that the Bill of Rights ensures specific rights and must be taught the confidence to defend those rights. This education is essential because it was at the heart of the formation of the Bill of Rights.²¹¹

However, schools are teaching the wrong lessons by adopting RFID tracking tool as the norm.²¹² Tracking technology was originally used to track cattle, inventory and pets; most recently it has been used to track prisoners.²¹³ Implementing those same tracking policies creates a “prison-like atmosphere at school.”²¹⁴ Therefore, as children develop in this atmosphere, they will accept this practice and accept the disturbing message that it is appropriate to track people like the family pet or a piece of inventory.

Schools will get children accustomed to being tracked from an earlier age.²¹⁵ Therefore, it is inevitable that children will become accustomed to wearing this sort of intrusive surveillance as they progress through school and into adulthood.²¹⁶ It will become a normality, teach-

210. See T.L.O., 469 U.S. at 373; see also Bd. of Educ., Island Trees Union Free Sch. Dist. No. 26 v. Pico, 457 U.S. 853, 864 (1982) (Brennan, J., joined by Marshall, and Stevens, JJ.) (pointing out that “public schools are vitally important ‘in the preparation of individuals for participation as citizens,’ and as vehicles for “inculcating fundamental values necessary to the maintenance of a democratic political system.”).

211. See U.S. CONST. amend. I, § I. Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances. *Id.*

212. Our Founding Fathers recognized the danger of discouraging “thought, hope and imagination” when preventing people from freely expressing their grievances. *Whitney v. California*, 274 U.S. 357, 375-76 (1927). It is the First Amendment that secures the right to freely express opinions and thoughts, and is what has allowed citizens over time to take a noble stance and bring injustices before the judiciary. U.S. CONST. amend. I, § I. The fact that children understand their rights is the reason that they have been able to defend those fundamental rights, arguing against restrictions enforced by schools. See, e.g., *Safford Unified Sch. Dist. No. 1 v. Redding*, 129 S. Ct. 2633, 2639 (2009); *Brannum v. Overton Cnty. Sch. Bd.*, 516 F.3d 489, 499 (6th Cir. 2008); *United States v. Aguilera*, 287 F. Supp. 2d 1204, 1209 (E.D. Cal. 2003); *New Jersey v. T.L.O.*, 469 U.S. 325, 348 (1985); *Tinker v. Des Moines Indep. Cnty. Sch. Dist.*, 393 U.S. 503, 506 (1969). Their courage comes from a long education throughout development about the essential policies of citizen’s rights and the freedom of expression. See *Whitney* 274 U.S. at 375-376. Thus, an education that teaches students that schools cannot implement policies overriding their rights is vital. *Id.*

213. INFORMATION SECURITY, *supra* note 1, at 13-14; see also Ozer, *supra* note 11, at 5; Dalal, *supra* note 4, at 486 ; Ozer, *supra* note 5; Newitz, *supra* note 18.

214. See Ozer, *supra* note 24.

215. Jeremy Shufflebarger, *Constitutional Law- “Can’t Touch This”: The Failing Standard of New Jersey v. T.L.O. in School Searches; Safford Unified School District No. 1 v. Redding*, 129 S. Ct. 2633 (2009), 10 WYO. L. REV. 575, 598 (2010).

216. *Id.*

ing them that they are simply “human inventory.”²¹⁷ Children’s sense, appreciation, and understanding of privacy will begin to diminish.²¹⁸

Fortunately, older students are similarly outraged by this treatment and have reported feeling that they were treated as a common object or a prisoner.²¹⁹ Preschoolers, however, like in the Head Start program in Richmond, California, are too young to question their rights.²²⁰ Older children can be vocally and actively opposed to such impositions, but preschoolers do not have the slightest notion otherwise, as they are too young to understand. Schools calculating the success of this technology based on the youth of preschoolers are taking advantage of children’s innocence.²²¹

Exposing children to being tracked from such a young age not only blurs, but also stifles the utilization of guaranteed privacy rights.²²² Children may mature with an assumed understanding that they are always being monitored and regulated by a higher authority.²²³ The same can be said when schools diminish students’ individual privacy and teach them from an early age that privacy is not something everyone is af-

217. *Human Inventory Control*, SCIENTIFIC AMERICA (Apr. 25, 2005), <http://www.scientificamerican.com/article.cfm?id=human-inventory-control>.

218. Consumer Federation of California, *More On “Chipping” (RFID) School Children*, PRIVACY REVOLT BLOG (Sept. 09, 2010), <http://consumercal.blogspot.com/2010/09/more-on-chipping-rfid-school-children.html>.

219. After students were required to wear identification badge embedded with an RFID chip, one student came home to her parents, infuriated that she was being required to wear the tracking device, telling her parents, “I’m a grocery item, a piece of meat, I’m an orange.” Ozer, *supra* note 24. Another student was interviewed, explaining that people who are tracked are prisoners or somebody that has done something very wrong. *Id.* See also Tiffany Craig, *Student Badges Equipped with Tracking Devices*, KHOU.COM (last updated Oct. 1, 2010 at 6:50 PM), <http://www.khou.com/news/Student-badges-equipped-with-tracking-devices-in-Santa-Fe-104181329.html>. Patrick Mann is a senior and said he feels like he’s in prison, “[n]ormally, the one people you would track are say prisoners or somebody that’s done something very wrong.” *Id.*

220. See Ximena Domínguez, et. al, *A Longitudinal Examination of Young Children’s Learning Behavior: Child-Level and Classroom-Level Predictors of Change Throughout the Preschool Year*, 39 SCH. PSYCH. REV. 1, 29, 30-32 (2010).

221. Shufflebarger, *supra* note 215, citing *Doe v. Renfrow*, 451 U.S. 1022, 1027-28 (1981) (Brennan, J., dissenting) “As Justice Brennan critically stated in his dissenting opinion in *Doe v. Renfrow*: “Schools cannot expect their students to learn the lessons of good citizenship when the school authorities themselves disregard the fundamental principles underpinning our constitutional freedoms.” *Id.*

222. Martin R. Gardner, *Student Privacy in the Wake of T.L.O.: An Appeal for an Individualized Suspicion Requirement for Valid Searches and Seizures in the Schools*, 22 GA. L. REV. 897, 907 (1988). “Outside the context of school searches, the courts grant full fourth amendment protection to young people subjected to searches and seizures by the police.” *Id.*

223. See *Tinker*, 393 U.S. at 506. This could prevent their creativity, leaving them to think inside the box. Students have protested wearing school uniforms because uniforms suppress a student’s ability to express their individuality. *Id.*

forded.²²⁴ Children cannot grow up under the impression that their privacy is not something they should fight for.²²⁵

RFID Tags are Not a Substitute for Responsible School Staff

One of the purposes for using RFID tracking systems is to free up teachers and school officials.²²⁶ It has been argued that using RFID technology to replace manual attendance is simply helping schools become more efficient and effective in its manual practices.²²⁷ The justification is that tracking attendance will free up time for the teachers.²²⁸

It is hard to believe, however, that there is convincing evidence that manual attendance practices is in dire need of a change. It is fair to say that manually taking attendance worked efficiently for all the years that other methods were unavailable, because the system has continuously been adopted as the method for taking attendance. Historically, the discovery of a more advanced system may not automatically mean that it is more effective, however. Technology is rarely without its problems, and RFID technology has already been proven to be an insecure system.²²⁹

The schools' argument that the new system will save significant time is questionable. Logically, taking attendance varies in time according to the number of students in the class.²³⁰ The time saved, however, by not taking manual attendance seems as though it could be only a matter of minutes. The amount of additional productive learning gained in those few minutes is no justification for the other negative consequences discussed here.²³¹

The act of taking attendance at the beginning of class serves as an acknowledgment to the teacher that the students are present and ready

224. See *West Virginia Bd. of Educ.*, 319 U.S. at 637.

225. For additional information, see GEORGE BLUM, ET AL., *FUNDAMENTAL RIGHTS AND PRIVILEGE, SPECIFIC FUNDAMENTAL RIGHTS, FIRST AMENDMENT RIGHTS, FREEDOM OF SPEECH AND PRESS, WHO IS PROTECTED, MINORS, STUDENTS, AND TEACHERS*, 16A AM. JUR. 2D CONSTITUTIONAL LAW § 489, (2d ed. 2010), available at Westlaw AMJUR CONSTLAW § 489; JANICE HOLBEN, ET AL., *STUDENTS, SCHOOL REGULATION OF STUDENTS, STUDENTS' RIGHTS TO FREEDOM OF EXPRESSION AND PERSONAL AUTONOMY, FREE SPEECH RIGHTS, IN GENERAL*, 67B AM. JUR. 2D SCHOOLS § 301 (2d ed. 2010), available at Westlaw AMJUR SCHOOLS § 301.

226. *Trend Report: RFID Tags Help Schools Keep Track*, ATT.COM, available at www.corp.att.com/edu/docs/k12rfid2.pdf.

227. *Id.*

228. *Id.*

229. See *supra* Part II(A)(3); see generally Nicola Sheldon, *The School Attendance Officer 1900–1939: Policeman to Welfare Worker?*, 36 HIST. EDUC. 6, 735 (2007).

230. SCHREYER INST. FOR TEACHING EXCELLENCE, *LARGE CLASS FAQ: ATTENDANCE* (2007), available at http://www.schreyerinstitute.psu.edu/pdf/Large_Class_FAQ_Attendance.pdf. The list describes different methods to effectively take attendance. *Id.*

231. See *supra* Part III(B)(1)(b).

to begin learning.²³² This encounter between teachers and students, though it may be only momentary, builds a relationship.²³³ Fostering positive relationships between students and teachers is at the heart of a successful education.²³⁴ It seems as though removing this first encounter builds a gradual barrier between teachers and students by separating them with a piece of technology.²³⁵ There are no negative consequences of requiring teachers and students to have a direct communication by acknowledging each other before class begins.

School administrators, on the other hand, do not have the same daily encounters with children as teachers do.²³⁶ They are in charge of managing the school.²³⁷ It then follows that when they visually monitor the school and the students, they have the opportunity to intermingle with the students. As the disciplinarians, knowing each student personally and individually is an important facet of the job.²³⁸ The use of RFID tracking technology, however, will allow school administrators to know the whereabouts of all the children, no matter where they are around the school. Consequently, the motivation to go and learn about students as individuals becomes less important, since they are able to keep tabs on all students by observing them on a computer screen, rather than by taking any personal interest in them.²³⁹

232. SCHREYER INST. FOR TEACHING EXCELLENCE, *supra* note 230. The list describes different methods to effectively take attendance and suggests that the teacher should interact with the students. *Id.*

233. See MICH. DEP'T OF EDUC., OFFICE OF SCH. IMPROVEMENT, STRENGTHENING TEACHER-STUDENT RELATIONSHIPS, available at www.michigan.gov/documents/3-3_107241_7.pdf.

234. See *id.* For a shy child, it may be the only time they are verbal in class. It is a proclamation for students to establish their place in the classroom. *Id.*

235. See MICH. DEP'T OF EDUC., OFFICE OF SCH. IMPROVEMENT, *supra* note 233. For quiet students who do not have the same courage as others to speak, they will go through class silent. *Id.* . These students will not be encouraged to speak, even through that initial announcement that they are present. Simply put, there is no good reason to eliminate this interaction. *Id.*

236. U.S. DEP'T OF LABOR, BUREAU OF LABOR STATISTICS, *Occupational Outlook Handbook*, (2010-11ed.), EDUCATION ADMINISTRATORS, available at <http://www.bls.gov/oco/ocos007.htm> (discussing that educational administrators oversee the school's daily activities and operation).

237. Dept. of Labor Handbook, *supra* note 235.

238. Kermit G. Buckner, *School Principal - The Role of Elementary and Secondary School Principals, Principal Duties and Responsibilities, Principal Qualifications*, EDUC. ENCYCLOPEDIA, <http://education.stateuniversity.com/pages/2333/Principal-School.html#ixzz1AIqEzRoP>.

239. It should be noted that this comment does not discount those teachers and school staff that may certainly utilize the time the RFID tags make available to become more efficient educators. There are those educators that most people can pinpoint who were simply outstanding teachers and they are cherished. Those teachers did not have such an incredible impact on students because they had a few extra minutes to make groundbreak-

It is idealistic for schools promoting the use of RFID trackers to ensure that every single teacher and administrator will use the newly found time to improve the education system. RFID technology does not give educators more time to devote to students; it simply diverts the responsibility of making sure children are safe while in their custody to a system. It may give teachers and administrators the opportunity to point the finger of blame at someone other than themselves. When a student goes missing because the RFID tag was tracked by an abductor outside the school, the school will have a scapegoat; it is just a new excuse.

There is only one way that the noble cause of protecting and accounting for students in schools can be sufficiently carried out. That one way is by putting the responsibility for the students directly on the people whose job it is to protect them. Schools exist to educate. Educators are not in schools for any reason other than to be invested in the education of students. Unless schools are able to support their argument that manual attendance isolates time that must be used for other purposes, this assertion is completely worthless.

The Schools' Interests are Insufficient

When balancing the interests between children's rights and schools' need to use RFID technology, the Court should apply the probable cause standard as opposed to the lesser reasonableness standard. Distinguishing the nature of the school's interests in *T.L.O.*, and as the dissent pointed out in that case, when balancing the interests, the Court should not consider the school's interest in maintaining safety and discipline because the probable cause standard already promotes those interests.

The schools' main argument against the use of the probable cause standard is that it is unable to be easily understood by the school officials and teachers.²⁴⁰ This, however, does not stand up against how the standard has been interpreted.²⁴¹ A lesser standard will not alleviate the difficulty on teachers and officials of interpreting the threshold of cause.

The probable cause standard simply sets forth the requirement that

ing strides with students. Those teachers are revered because they had a sincere devotion to education.

240. See *T.L.O.*, 469 U.S. at 353 (Blackmun, J., concurring) (discussing that "a teacher has neither the training nor the day-to-day experience in the complexities of probable cause that a law enforcement officer possesses, and is ill-equipped to make a quick judgment about the existence of probable cause")

241. See *T.L.O.*, 469 U.S. at 364. (citing *Illinois v. Gates*, 462 U.S. 213, 232, 236, 239 (1983)). "This Court expounded at some length its view of the probable-cause standard. Among the adjectives used to describe the standard were practical, fluid, flexible, easily applied, and nontechnical." *Id.*

a reasonable person would have believed the search to be necessary.²⁴² Such a standard is not, and should not be, too difficult for a person who educates the youth of this country. Further, a more precise interpretation points out that the reasonable person is not based on the reasonableness of the legal profession, but on “the factual and practical considerations of everyday life on which reasonable and prudent men act.”²⁴³

The test is a common sense test, which cannot honestly be said to be too difficult for trained, educated adults to understand. It does not matter that the context of the search is that of a school; officials are simply required to be flexible in maintaining safety and discipline. Therefore, the Court’s understanding of the probable cause standard as a common sense test should be accepted.

IV. CONCLUSION

The probable cause standard is the only constitutionally supported standard of reasonableness that should be applied to searches utilizing RFID technology in schools.²⁴⁴ It is the only standard that finds support in the Fourth Amendment, which specifically protects against unreasonable searches.²⁴⁵ Careful inspection of the words in the Fourth Amendment make it clear that it was written with preciseness so as to require probable cause to protect all people against unreasonable search and seizure.²⁴⁶ The means of determining the reasonableness are found in

242. See T.L.O., 469 U.S. at 363-64 (quoting *Carroll v. United States*, 267 U.S. 132, 162 (1925)). The Court quoted the holding in *Carroll*, that law enforcement authorities have probable cause to search where ‘the facts and circumstances within their knowledge and of which they had reasonably trustworthy information [are] sufficient in themselves to warrant a man of reasonable caution in the belief that a criminal offense had occurred. *Id.*

243. See *Brinegar v. United States*, 338 U.S. 160, 175 (1949). In dealing with probable cause, however, as the very name implies, we deal with probabilities. *Id.* These are not technical; they are the factual and practical considerations of everyday life on which reasonable and prudent men, not legal technicians, act. *Id.*

244. See T.L.O., 469 U.S. at 359 (Brennan, J., dissenting).

245. *Id.*

246. See T.L.O., 469 U.S. at 359 (Brennan, J., dissenting). The dissent points out that the prerequisite of probable cause to a full-scale search is based on the relationship between the two Clauses of the Fourth Amendment. *Id.* “The first Clause states the right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, states the purpose of the Amendment and its coverage. *Id.* The second Clause adds that no Warrants shall issue but upon probable cause, gives content to the word ‘unreasonable’ in the first clause. .” *Id.* While there are narrowly defined searches that don’t adhere to the probable cause standard, all others are reasonable only if supported by probable cause.” *Id.* See also *Katz v. United States*, 389 U.S. 347, 359 (1967) (stating that “wherever a man be, he is entitled to know that he will remain free from unreasonable searches and seizures”).

the Warrant Clause,²⁴⁷ which requires a warrant and probable cause. Consequently, a rebalancing of the interests involved in any specific case finds no support in the Constitution. The fact that schools propose an overly broad interest in maintaining safety and discipline in schools is insufficient to reduce a threshold of proof set forth by the founders of the United States.

More importantly, these broad interests should not be given weight when the Constitution grants all individuals a “zone of privacy” that cannot be breached when the reasonableness of the search has not passed the muster of the probable cause standard.²⁴⁸ No matter what the motivation - whether it be a “momentary evil that has aroused [officials’] fears” or even searches supported by “a majority of citizens” – the “liberty of each citizen to assuage the perceived evil” cannot be scarified.²⁴⁹

If the *T.L.O.* test were applied to the use of RFID tags as a tracking device in schools, it would strike an unequal balance between the interests by failing to accord the appropriate consideration to the students’ interests. The only way to sufficiently protect the interests of the students, while allowing the school to implement RFID technology, is if the school can show probable cause for implementing the policy.²⁵⁰

The use of RFID technology to induct a search on students is unlike any search the Court has ruled on.²⁵¹ The reason the standard was reduced was to allow schools the flexibility to decide to use certain methods in a short span of time.²⁵² For other school searches this may have been necessary, however, having such flexibility when imposing the use of RFID tags to track students is not the same. It is not a disciplinary mea-

247. See *T.L.O.*, 469 U.S. at 359 (Brennan, J., dissenting).

248. *Id.*

249. *Id.*

250. See Neal I. Aizenstein, *Fourth Amendment-Searches by Public School Officials Valid on “Reasonable Grounds”*, 76 J. CRIM. L. & CRIMINOLOGY 898, 930 (1985).

The traditional probable cause standard, unlike the ‘reasonable grounds’ standard which affords less constitutional protection to students than adults or other children, adequately protects students’ right to privacy. Applying the probable cause standard to searches conducted in public schools would demonstrate to students the importance of the fourth amendment’s protections to all persons in our democratic society. Thus, instead of adopting the ‘reasonable grounds’ standard, the Court should have applied the traditional probable cause standard for searches conducted by school officials because the probable cause standard would provide school officials with a means of maintaining an educational environment while also protecting the privacy interests of students. *Id.*

251. See, e.g., *Katz*, 389 U.S. at 347 (1967) (wire-tapping); *Kyllo v. United States*, 533 U.S. 27 (2001) (thermal-imaging device); *Dow Chem. Co. v. United States*, 476 U.S. 227 (1986) (aerial surveillance); *United States v. Knotts*, 460 U.S. 276 (1983) (beeper monitoring).

252. See *T.L.O.*, 469 U.S. at 340 (1985) (holding that school officials need not obtain a warrant before searching a student who is under their authority because of the need for swift investigation).

sure that can be implemented momentarily as it takes time and funding to set up the system.²⁵³

As the use of RFID technology is not an arbitrary measure without negative consequences,²⁵⁴ the probable cause standard will prevent arbitrary use of this technology. This standard is more stringent than the reasonableness standard;²⁵⁵ therefore, it will ensure that schools are not implementing RFID technology without cognizable cause. It will also force schools to think about the reasons they are using the technology and how it might impact the children.

Readopting the probable cause standard will also send a necessary message to schools. Schools must understand the consequences of using RFID technology. Hopefully, by understanding the real outcome of its use, schools will attempt to address their interests the old fashion way, with better training and hard work.

253. *RFID System Components and Costs*, RFID JOURNAL, <http://www.rfidjournal.com/article/print/1336> (last visited Jan. 7, 2011).

254. As stated earlier in this comment, specifically in Part II(A)(3), the technology is susceptible to hacking from outside readers. The technology is not safe from being implicated and will jeopardize the safety of the children forced to wear it.

255. T.L.O., 469 U.S. at 341 (finding that the reasonableness standard stops short of probable cause).