Law Enforcement and Technology: Requiring Technological Shields to Serve and Protect Citizen Rights

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Technological Shields to Serve and Protect Citizen Rights

By: Ryan Pulley*

ABSTRACT

An often revisited topic is the tension between law enforcement and the citizens they aim to protect. One side of this discussion seeks to mitigate the tension by explaining the hard decisions that law enforcement officers must make to protect citizens and themselves, while the other emphasizes the corruption that exists within police departments. Recently, this discussion has begun a critical examination of the role of technology within police department to determine whether police officers are properly monitored and trained.

Both citizens and police forces alike should require that law enforcement officers utilize publicly available technologies that protect citizens’ rights. Many of these technological shields that exist on the market today, which yield benefits for both citizens and police, have not been widely implemented throughout law enforcement agencies. This Comment focuses on two emerging technologies: Faraday Bags and police worn body cameras. By employing these technological shields, police officers can ensure that citizens obtain greater protection for their Fourth and Fifth Amendment Rights. Simultaneously, the technology allows police to shield themselves from liability and vindicate themselves in the eyes of their community when their actions are questioned, but justified. These technologies carry the potential to provide a protective buffer between citizens and police, lessening the tensions between the two by protecting those who act lawfully and punishing those who do not.

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INTRODUCTION

Law enforcement is no stranger to technology. Tazers, automatic license plate recognition, tracing devices, and wiretaps are but a few of the technologies at police disposal, most of which intrude on citizens’ rights.1 These examples are not mentioned to allege that police use of this technology is inherently suspect, but rather to demonstrate that police know how to voluntarily implement technology in the field as they serve and protect. Furthermore, police forces have implemented technology that protects citizens’ rights, and have recognized the beneficial effects that such tools have on police departments.2 Indeed, in a technological society, police cannot fully serve and protect citizen rights without using certain technological shields.

Throughout the last sixty years, the Supreme Court of the United States has had numerous opportunities to assess new technologies that the police have used in investigating or responding to criminal activity. Although the Court has addressed technology in many different

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areas of the law, one of the most prevalent areas is Fourth Amendment search and seizure cases.\textsuperscript{3} Most of the cases involve police officers using technology to obtain information that would have been unattainable without entering a home or interrogating a suspect.\textsuperscript{4} Recent cases, however, indicate that the Court has adopted a new view of police and technology. Specifically, the Court has published two decisions that may greatly impact how police look at technology.\textsuperscript{5} In the first decision, \textit{Kyllo v. United States}, the Court restricted police use of technology that intrudes on citizens’ rights if that technology is not publicly available.\textsuperscript{6} In the second decision, \textit{Riley v. California}, the Court suggested that police ought to use technology that may better protect citizens’ rights.\textsuperscript{7}

This Comment seeks to synthesize the Court’s recent jurisprudence on technology with the reality that technology plays a greater role in policing than ever before. To achieve this synthesis, this Comment analyzes when the use of technology by police should be required as a matter of law. Specifically, this Comment argues that police officers should be required, rather than simply permitted, to use publicly available technology that will protect citizens’ rights.


\textsuperscript{4} See Jones, 132 S. Ct. at 948-49; Katz, 389 U.S. at 348, 353.


\textsuperscript{6} Kyllo, 523 U.S. at 40.

\textsuperscript{7} Riley, 134 S. Ct. at 2487.
Existing executive programs are already in place to discover, maintain, and distribute a list of technological shields to police departments across the nation.

The argument proceeds as follows. Part I examines the Court’s past responses to police technology and analyzes two technologies police already use—interrogation room recording equipment and dashboard cameras—to determine how they benefit citizens and police, and at what cost. Part II discusses the practicability of requiring police departments to use publicly available technology by analyzing the cost and benefits of implementing Faraday Bags and body cameras in five representative police departments. Part III calculates the total cost of Faraday Bags and body cameras, and proposes the enactment of a rule requiring police departments and officers to implement publicly available technology that safeguards citizens’ rights. This Comment concludes by reemphasizing the need for the proposed requirement and discusses the logistics of how the rule may be implemented.

I. HISTORICAL BACKGROUND

This part offers the reader some historical background on two different trends relevant to this Comment’s discussion of technology and policing. Part A explains how the Supreme Court of the United States has historically permitted and restricted police use of technology capable of intruding on citizens’ rights. Part B analyzes law enforcement’s implementation of interrogation room recording equipment and dashboard cameras to evaluate the benefits they provide to citizens’ rights as well as police officers. This information is offered as a way to assess how a rule requiring police to use publicly available technology fits within Supreme Court precedent, and complies with pre-existing police practices.
A. *The Court’s Historical Response to Technology*

One of the earliest Supreme Court cases involving technology involved wiretapping, a form of police eavesdropping on telephone calls.\(^8\) The police officers in *Olmstead v. U.S.* set up wiretaps along five different telephone wires, without physically trespassing upon any of the suspects’ property, which allowed officers to listen in on any telephone conversations made in order to gather evidence pertaining to a large-scale liquor bootlegging operation.\(^9\) Upon review, the Court held that the use of wiretaps did not violate the Fourth Amendment’s restriction against unreasonable searches because the Fourth Amendment only protects against physical intrusions into the home, not the placement of wires outside the home.\(^10\) Thus, the Court sanctioned the use of technology that did not require the police to trespass onto the suspect’s property.

Trespass theory—determining the legality of police action by asking whether officers physically trespassed onto personal property—became the test for all new listening technologies for the next forty years. For example, in *Goldman v. U.S.*, the Court applied it to uphold a police officer’s use of a detectaphone, a device capable of amplifying sounds heard through a partition wall because it did not require a trespass.\(^11\) Likewise, in *Silverman v. U.S.*, the Court used the trespass theory to ban the use of a spike mike—an electronic microphone attached to a foot long spike that amplifies and transmits sounds into receiving headphones—because the device’s

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\(^9\) *Id.*

\(^10\) *Id.* at 466.

placement in the building’s heating duct constituted a trespass. Thus, from 1928 to 1961, the Court was able to determine the constitutionality of police use of technology by asking whether such technology physically penetrated the premises to constitute a search.

However, six years later in 1967, the Court temporarily abandoned the trespass theory, requiring instead a two-prong privacy test for analyzing “technological” investigative techniques. In *Katz v. U.S.*, the Court held that a police officer’s attachment of an electronic listening/recording device to a phone booth violated the Fourth Amendment because the defendant had an expectation of privacy while conversing in the phone booth. Overruling the trespass theory underlying both *Olmstead* and *Goldman*, *Katz* established a new test to ban the use of any technology that would unreasonably violate privacy.

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13 The trespass theory was later combined with the *Katz* test in *U.S. v. Jones*, 132 S. Ct. 945, 948-49 (2012), making police action a search if it trespasses onto a suspect’s property or invades a suspect’s subjective expectation of privacy which society is prepared to recognize as reasonable.

14 *Katz v. U.S.*, 389 U.S. 347, 348, 353 (1967). It is interesting to note that the Government argued the police relied on *Olmstead* and *Goldman*, showing that police agencies are fully aware of how the Court views their use of various technologies.

For five decades, the Court has routinely applied the *Katz* test to determine whether police use of technology violates a subjective expectation of privacy recognized by society as reasonable. For example, the Court found constitutional the use of a tracking device placed in a barrel of chloroform prior to the defendants’ purchase.\textsuperscript{16} The Court reasoned that using the beeper did not amount to a search because there is no subjective or reasonable expectation of privacy in one’s publicly observable movements on a public thoroughfare.\textsuperscript{17}

More recently, within the past fifteen years, the Court has authored two decisions directly pertaining to the use of technology by police: *Kyllo v. U.S.* and *Riley v. California*.\textsuperscript{18} In *Kyllo v. U.S.*, the Court considered the constitutionality of police use of thermal imaging devices and similar sense-enhancing technology capable of gathering information about the interior of the home.\textsuperscript{19} Ultimately, the Court held that the use of the thermal imaging device was unconstitutional because it allowed the Government to learn intimate details about the private interior of the home, details that would be otherwise unobtainable without an actual physical intrusion.\textsuperscript{20}


\textsuperscript{17} Id. at 277, 281, 285.


\textsuperscript{19} *Kyllo*, U.S, 523 U.S. at 29. The police used a thermal imaging device to detect if Kyllo used high-intensity heat lamps to grow marijuana at his home. *Id.* The thermal imaging device used detects infrared radiation invisible to the naked eye and converts that radiation into images based on the relative warmth ranging from black (cool) to white (hot) with shades of gray in the middle. *Id.*

\textsuperscript{20} *Id.* at 40.
The Court’s qualification of the *Kyllo* holding is most important for the purposes of this discussion. Specifically, the Court stated that it is a violation of the Fourth Amendment for Government investigators to use technology that is not in “general public use.” The converse of this rule then is to allow police to use publicly available technology. The Court crafted this rule—forbidding police use of technology until it becomes publicly available—in anticipation of future cases caused by rapid technological development.

If the Court is willing to recognize the negative implication of technology, should it recognize technology’s benefits? Should the police be required to use publicly available technology that has a positive effect on citizens’ rights? This question was answered recently in the consolidated cases *Riley v. California* and *U.S. v. Wurie.*

In *Riley*, an officer stopped a car for driving with expired registration tags, learned the driver’s license was suspended, and ultimately impounded and inventory searched the car. This search uncovered concealed and loaded handguns under the car’s hood, which led to the driver’s arrest. During the search incident to arrest, the officer seized a smart phone from the driver’s pocket, noticed a gang-related acronym on the phone’s screen, and took the phone to the police station. Two hours later, a detective conducted a warrantless search of the phone and uncovered photos and videos of gang activity, as well as a photo of the driver standing in front of a car that

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21 *Id.*

22 *Id.* at 51 (Stevens, J. dissenting).


24 *Id.*

25 *Id.*

26 *Id.*
police suspected was involved in a previous shooting. These images were then used to charge the driver with the earlier shooting.

In the companion case Wurie, police witnessed a drug deal and arrested the drug dealer. The officers took the dealer to the station for booking, which led to the discovery of two phones in his pocket. The officers noticed that one phone was receiving calls from a contact saved as “my house”; these officers then traced the number back to an apartment building that contained the dealer’s name on a mailbox. Afterwards, the police obtained a search warrant and seized drugs, weapons, ammunition, and cash, which the government used to prosecute Wurie.

Considering these cases as companions, the Court held that a warrant is generally required before police search the digital information on a cell phone, even when the phone is

27 Id. at 2480-81 (The acronym was CK for Crip Killers, which is a common gang nickname for the Bloods).

28 Id.


30 Id. The main phone at issue in this case was a flip phone, not a smart phone. Id.

31 Id.

32 Id. at 2481-82. In Riley, the appellate court affirmed the conviction by relying on earlier case law which held that the Fourth Amendment permits warrantless searches of cell phone data incident to arrest if the cell phone was immediately associated with the arrestee’s person. Id. at 2481. The appellate court in Wurie, however, reversed the denial of a motion to suppress the evidence holding that “cell phones are distinct from other physical possessions that may be searched incident to arrest without a warrant, because of the amount of personal data cell phones contain and the negligible threat they pose to law enforcement interests.” Id. at 2482.
seized incident to arrest.\textsuperscript{33} The Court reasoned that the large quantity of private data found on modern cell phones, due to their extensive storage capabilities, justifies maintenance of the warrant requirement, but upheld warrantless searches of the exterior of the phone to ensure officer safety.\textsuperscript{34} Furthermore, the Court reasoned that police officers have other means to protect the evidence on the phone from remote tampering, which is crucial to this Comment’s analysis.\textsuperscript{35}

In response to data tampering, the Court offered four potential methods of preserving evidence on a phone: (1) police may be able to search the phone under exigent circumstances, if they believe there is risk of an immediate loss of data, (2) police can disable the phone’s automatic-lock feature to prevent the phone from encrypting the data, (3) police can turn the phone off and remove the battery, or (4) police can use a Faraday Bag, which is a cheap, lightweight, and easy to use aluminum bag capable of isolating the phone from radio waves and remote tampering.\textsuperscript{36} By mentioning this fourth approach, the Court implicitly suggested that police should use technology to prevent tampering while simultaneously preserving citizens’ privacy rights. By combining the holding in \textit{Kyllo} with the \textit{Riley} suggestion, this comment argues that police should be required to use publicly available technology in an effort to safeguard citizens’ rights.

B. \textit{Commonly Used Technologies that Protect Citizens’ Rights}

This section addresses two different technological shields that are already widely used by law enforcement: interrogation room recording equipment and dashboard cameras. It begins by

\begin{itemize}
\item \textsuperscript{33} \textit{Id.} at 2493.
\item \textsuperscript{34} \textit{Id.} at 2485, 2495-96.
\item \textsuperscript{35} \textit{Riley v. California}, 134 S. Ct. 2473, 2487 (2014).
\item \textsuperscript{36} \textit{Id.}
\end{itemize}
analyzing how interrogation room recording equipment functions, the jurisdictions that implement the technology, and the cost. This three part framework is then applied to dashboard cameras. Finally, it concludes by noting the benefits to citizens and police, as well as criticisms of such technology.

The first commonly used technology is interrogation room recording equipment. Interrogation room recording equipment can be defined as technology capable of recording audio and video that can be installed in police stations to record interrogations. Despite the variability of interrogation room recording equipment, its two basic features include a camera with a lens wide enough and positioned in a manner that captures an entire room, as well as a table top microphone positioned to capture every voice in the room. The use of audiovisual recording equipment in interrogation rooms acts as a watchdog over police to prevent officers from violating citizens’ Miranda rights or coercing false confessions.

Interrogation room recording equipment is commonly used by law enforcement. The Innocence Project reports that over 850 jurisdictions in the United States use interrogation room


39 Thurlow, *supra* note 37, at 771, 794.
recording equipment. At the federal level, the Department of Justice recently released a memo encouraging federal agents to record interrogations of suspects in federal custody unless a suspect refuses, the interrogation involves information pertinent to national security, or the head of the field office has cause to not record. At the state level, numerous states recognize the benefits of interrogation room recording equipment, and require them by law.

The cost of interrogation room recording equipment can vary greatly depending on the type of equipment purchased, installation, and the number of interrogation rooms within the police department. In fact, the New Jersey Supreme Court Special Committee reported that an interrogation room video system consisting of “a commercial grade video camera with a wide-angle lens to cover the interrogation room, a tabletop microphone, and an audio mixer” can be

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42 See 725 ILL. COMP. STAT. ANN. 5/103-2.1(b) (West 2014); ARK. R. CRIM. P. §4.7 (West 2012); OR. REV. STAT. ANN. § 133.400 (West 2010); N.M. STAT. ANN. § 29-1-16 (West 2006). This is but a few examples.
purchased for under $1,000.00. Police departments can mitigate this cost by buying a simple $200 mobile camcorder, which they can move from room to room and set up on a tripod.

Dashboard cameras (also known as dash cams) are cameras mounted on a dashboard by way of a suction cup or direct dash friction mounts; they can also be built in to a rear view mirror. Dash cams can be powered either by batteries or a vehicle power port and are capable

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of recording video onto removable storage.\textsuperscript{46} Most law enforcement dash cams begin recording when the police cruiser triggers its emergency lights or exceeds a certain speed.\textsuperscript{47} While the dash cams can be turned on and off manually by the officers, departments have specific policies as to when an officer can turn them off.\textsuperscript{48}

Dash cams are widely used by police departments. While the federal government does not appear to have a dash cam requirement, dash cams are being used by the Department of Homeland Security’s U.S. Customs and Border Protection Agency.\textsuperscript{49} Furthermore, the Department of Justice’s Office of Community Oriented Policing Services created a dash cam incentive program to encourage local police forces to adopt dash cams; it has awarded over $21 million in federal grants to purchase the equipment.\textsuperscript{50} This program led 47 states and the District

\textsuperscript{46} Id.


\textsuperscript{48} Id.


of Columbia to purchase dash cams from 2000 to 2003.\textsuperscript{51} In 2007, the Department of Justice reported that sixty-one percent of local police departments use dash cams.\textsuperscript{52}

The cost of dash cams varies greatly. Consumers can purchase dash cams for under $30, but police dash cams are much more expensive.\textsuperscript{53} “Older dash cams have cost some law-enforcement agencies as much as $7,000,” but less expensive models are now sold from $2,000 to $5,000, which does not include the cost of software and data storage equipment.\textsuperscript{54} Even this cost may be too large for smaller agencies.\textsuperscript{55}

While both interview room recording equipment and dash cams are expensive, they have yielded enormous benefits. Matthew D. Thurlow, a scholar on interrogation room equipment, notes two benefits that recording interrogations provides to suspects—it creates an objective record, and it protects constitutional rights—but this also applies to dash cams.\textsuperscript{56} The objective record provided by interrogation room recordings gives the trier of fact a better understanding of

\textsuperscript{51} Id.

\textsuperscript{52} Brian A. Reaves, Office of Justice Programs, Dep’t of Justice, Local Police Departments, 2007, at 7 (2007), available at http://www.bjs.gov/content/pub/pdf/lpd07.pdf.


\textsuperscript{55} Id.

\textsuperscript{56} Thurlow, supra note 37, at 807-09.
the nature of the interrogation to verify the confession is not false by ensuring the suspect’s due process and *Miranda* rights were honored.\(^57\) This objective record serves to exonerate innocents, and has done so in a number of cases.\(^58\) Similarly, dash cams can protect citizens from false arrests and false charges, and can be used to hold police accountable if they harass citizens or illegally detain them.\(^59\) Dash cams and interrogation room recordings are also useful evidence in

\(^57\) *Id.* at 807, 808. If the suspect’s rights are not honored, the confession will be thrown out of the prosecutor’s case in chief.


any civil or criminal suit that a suspect brings against the officer for misconduct, such as excessive force.\footnote{Thurlow, \textit{supra} note 37, at 809. See Harold Hayes, \textit{Chase Suspect to File Civil Lawsuit, Use Dash Cam Video as Evidence}, CBS PITTSBURGH (June 13, 2014, 6:27 PM), http://pittsburgh.cbslocal.com/2014/06/13/chase-suspect-to-file-civil-lawsuit-use-dash-cam-video-as-evidence/ (Showing lawyer who plans to use dash cam video to sue officers pistol whipping client").}


Interrogation room recording equipment and dash cams are also beneficial to police departments; they protect the officer from erroneous claims and provide tactical advantages that lead to increased convictions and reduced suppression claims.\footnote{Thurlow, \textit{supra} note 37, at 810-812; Lonnie J. Westphal, \textit{The In-Car Camera: Value and Impact}, THE POLICE CHIEF, Aug. 2004, \textit{available at} http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=358.} Both interrogation room equipment and dash cams produce a higher quality of evidence by remedying the gaps in memory of a testifying officer; moreover, juror retention of information improves because they

\underline{Moriarty sponsored a bill requiring all New Jersey police cruisers to have dash cams after he was personally arrested after a road side stop on false drunk driving charges.)}
watch a video of the interrogation rather than only hearing oral testimony.\textsuperscript{63} Furthermore, recording interactions results in more convictions, fewer suppression claims, and fewer appeals because citizens are less likely to challenge alleged police misconduct if they clearly waive their \textit{Miranda} rights or resist arrest on camera.\textsuperscript{64}

Recorded interactions also aid law enforcement because they provide both a teaching mechanism and an oversight mechanism. Recording devices allow officers to observe interrogations and critique the techniques used, which is relevant to both the training and the disciplinary setting by allowing interrogating officers and others to review past interrogations and learn from the mistakes made, and allowing internal affairs and supervisors to hold officers accountable for misconduct to stop them from repeating past mistakes.\textsuperscript{65} Similarly, the greatest benefit of recording field interactions via dash cams is the increase in officer safety.\textsuperscript{66} Increased safety stems from allowing officers to review encounters and make note of actions that impaired their safety, such as turning their backs on a potentially dangerous individual, and to deescalate confrontation situations by informing citizens that the dash cam is recording.\textsuperscript{67}

Despite the benefits of interrogation room recording equipment and dash cams, there have been four principal issues raised: a potential chilling effect, privacy implications, improper manipulation of the recordings or equipment, and equipment malfunction.

\textsuperscript{63} Thurlow, \textit{supra} note 37, at 812.

\textsuperscript{64} \textit{Id.} at 811.

\textsuperscript{65} \textit{Id.} at 810-11.

\textsuperscript{66} Westphal, \textit{supra} note 62.

\textsuperscript{67} \textit{Id.}
The major criticism of interrogation room equipment, which can be conceivably applied to dash cams, is the chilling effect that it may have on interrogations or field questionings. The fear is that a suspect may refuse to speak if he knows he is being recorded, resulting in fewer confessions, but a study by William A. Geller, associate director of the police executive research forum for the National Institute of Justice, largely debunks this fear. As for privacy concerns and police tampering with equipment, they interrelate and can be discussed together. While it is true that stress levels may be higher during monitored interactions and interrogations, causing police to be tempted to tamper with cameras to obtain a moment of relaxation or to censure behavior they believe is inappropriate or illegal, Thurlow notes that these concerns can be remedied by creating strong department recording policies providing officers with some

68 Thurlow, supra note 37, at 801.

69 Id.

70 The study provides some evidence of the chilling effect, noting that 8.6 percent of the recording agencies’ experienced suspects who were less willing to talk when being recorded, but this reduction was offset by findings that that 28.3 percent of agencies reported an increased willingness to talk and 61.3 percent reported no change. Geller, supra note 2, at 6.

71 For example, some dash cams will not activate unless the officer turns on his emergency lights, creating the chance that the officer bypasses the camera purposefully or finds himself in an immediate emergency where he does not have time to go back to his car and turn on the lights. Nick Wing, Police Officer Who Killed Black Teen in Missouri Had Been Issued Body Camera, Wasn’t Using It, THE HUFFINGTON POST (Dec. 24, 2014, 12:50 PM), http://www.huffingtonpost.com/2014/12/24/antonio-martin-body-camera_n_6377626.html.
tactical discretion.\textsuperscript{72} In terms of protecting citizen privacy, interrogation and dash cam recordings may have to be redacted to exclude certain inadmissible portions.\textsuperscript{73}

As for equipment malfunction, the camera and microphone may fail to record everything, or the suspect might move out of view of the stationary dash cam.\textsuperscript{74} Equipment malfunction is always a concern and can only be remedied by testing the equipment both before and periodically during police interactions or interrogations.\textsuperscript{75} Furthermore, police officers can be tactically trained to park patrol cars in ways that minimize the possibility of a citizen avoiding the dash cam’s view.\textsuperscript{76} If the microphone or camera in the interrogation room or patrol car fails to pick up part of the interview, witnesses and police officers can supplement these through testimony.

As shown, police have already implemented technologies that both help protect citizens’ rights and benefit police departments. Because some departments are already in the practice of implementing technological shields, requiring law enforcement agencies to be proactive about using new technology should not be seen as burdensome. What publicly available technological devices capable of preserving citizens’ rights are currently on the market but have not been

\textsuperscript{72} Thurlow, \textit{supra} note 37, at 801.

\textsuperscript{73} \textit{Id.} at 802

\textsuperscript{74} Thurlow, \textit{supra} note 37, at 802; Erika Anguilar, \textit{LAPD Finds That Patrol Car Dash Cameras Are No Panacea}, 89.3 KPCC (Dec. 05, 2014), \url{http://www.scpr.org/news/2014/12/05/48504/lapd-finds-that-patrol-car-dash-cameras-are-no-pan/}.

\textsuperscript{75} See Anguilar, \textit{supra} note 74 (explaining that checking dash cam equipment should be as important as checking whether officers’ guns are loaded).

\textsuperscript{76} \textit{Id.}
Part II answers this question by analyzing Faraday Bags and body cameras.

II. PUBLICLY AVAILABLE TECHNOLOGY CAPABLE OF PRESERVING CITIZENS’ RIGHTS

This part focuses on two publicly available technologies that are useful in preserving citizens’ rights: Faraday Bags and body cameras for police officers. The analysis treats each piece of technology individually in an effort to provide a comprehensive understanding of why the technology is a practical technological shield. Each technology segment gives an overview of the technology, examines the jurisdictions that have implemented the technology to determine if the implementation is optional or required, and concludes by analyzing the costs and benefits of the technology.

A. Faraday Bags: A Solution to Warrantless Cell Phone Searches

Faraday Bags (also known as Faraday Cages) are “essentially sandwich bags made of aluminum foil: cheap, lightweight, and easy to use,” and capable of isolating cell phones from radio waves. Professor Adam Gershowitz describes Faraday Bags as aluminum structures—such as the microwave oven in most homes—designed to keep radio waves from reaching the other side of the structure. By placing a cell phone into the bag, an officer cuts off a phone’s communication with the outside world, effectively preventing citizens or co-conspirators from

77 This analysis hopes to not only show that citizens will benefit from police use of technology, but also the courts, the municipalities, and the police officers themselves.


79 Adam M. Gershowitz, Seizing a Cell Phone Incident to Arrest: Data Extraction Devices, Faraday Bags, or Aluminum Foil as a Solution to the Warrantless Cell Phone Search Problem, 22 WM. & MARY BILL RTS. J. 601, 607 (2013).
remote wiping or remote tampering with its data.\textsuperscript{80} Thus, by placing a citizen’s cell phone into a Faraday Bag, a police officer can secure digital evidence long enough to obtain a warrant and perform a legal search of the phone. These bags are specifically manufactured for law enforcement and can be easily made by police officers themselves.\textsuperscript{81} In the absence of a Faraday Bag, a police officer can wrap the phone in layers of aluminum foil.\textsuperscript{82} Faraday Bags are often described as an easy, cost-effective, portable solution to warrantless cell phone searches.\textsuperscript{83}

\textsuperscript{80} Id.

\textsuperscript{81} Id. at 607, 609.

\textsuperscript{82} Id. at 609.

\textsuperscript{83} See U.S. v. Smith, No. S1-4:11CR288 RWS, 2012 WL 1309249, at *13 (E.D. Mo. Mar. 13, 2012) (concluding the agent’s use of a Faraday bag to preserve evidence was not improper); Brief of Amici Curiae Criminal Law Professors in Support of Petitioner Riley and Respondent Wurie at 3-6, Riley v. California, 134 S. Ct. 2473 (2014) (Nos. 13-132, 13-212) 2014 WL 931832, at *3-6; Patrick Brown, Note, Search of Cell Phones Incident to Arrest: Overview of the Law as it Stands and a New Path Forward, 27 HARV. J.L. & TECH. 563, 583 (2014) (describing it as a small, light, cheap, reusable pouch that blocks signals to and from a phone and can be carried on an officers belt); Kevin Wempe, Comment, United States v. Flores-Lopez: Protecting Privacy Rights in Cell Phone Searches Incident to Arrest, 62 U. KAN. L. REV. 195, 211–212 (2013) (noting that Faraday bags are cheap, can be used easily with very little training, and can fit in the glove compartment of a police cruiser unlike the majority of equipment already found in police vehicles). But see U.S. v. Flores-Lopez, 670 F.3d 803, 810 (7th Cir. 2012) (concerned about the burden on “police of having to traipse about with Faraday . . . and having to be instructed in the use of these methods for preventing remote wiping or rendering it ineffectual).
The benefits of a Faraday Bag are well known to law enforcement. In 2006, Law Officer Magazine published an article advising readers on ways to protect evidence on mobile phones. The authors assert that the first step in protecting the evidence is placing a cell phone on airplane mode and dropping it in a Faraday Bag. The same article lists paint cans and aluminum foil as less secure forms of Faraday Bags. In April 2008, the Department of Justice’s National Institute of Justice released a special report identifying Faraday Bags as a tool that federal first responders should include as part of a packing procedure when collecting digital evidence. While the report does not make the use of Faraday Bags mandatory for federal agents, it strongly encourages their use. State forensic agencies have released similar guidelines recommending the use of Faraday Bags when collecting digital evidence.


85 Id.

86 Id.


Since Riley was decided, a number of states, including Florida, Arizona, Idaho, Massachusetts, Washington, and Virginia, have each encouraged police officers to employ Faraday Bags when securing wireless devices. For example, West Virginia codified the use of faraday bags to block wireless signals from a phone; VA Dep’t of Forensic Sci, Evidence Handling & Laboratory Capabilities Guide, at III-6 (2012), available at http://www.crime-scene-investigator.net/EvidenceGuide_VA.pdf (noting that it is of the utmost importance to protect cellphones from receiving signals when collecting them, which can be done by placing them in a shielded bag).

VA Code Ann. T. 19.2, Ch. 5: Search warrants (referring to the Gershowitz article in the references and annotations of the code); Becky Herrin, Deputy of the Monroe County Sherriff’s Office, Weekly Wrap Up: Legal Update September 2013, Monroe County Sheriff’s Office (Sept. 13, 2013), http://www.keysso.net/employees/weekly_rap_up/2013/09132013.pdf (Recommending the use of Faraday bags to secure phones until a search warrant is obtained); Chenda Ngak, LulzSec Takes on Arizona Law Enforcement, CBS News (Aug. 29, 2011, 3:18 PM), http://www.cbsnews.com/news/lulzsec-takes-on-arizona-law-enforcement/ (mentioning a leak of Arizona Department of Public Safety files, including a memo recommending law enforcement seizing iphones to place the phones in Faraday bags or other similar storage containers as soon as possible); Municipal Police Training Committee, Legal Update: The Supreme Court Holds that Police Need a Warrant to Search Cell Phones even when Searching an Individual Incident to Arrest (June 26, 2014), http://www.mass.gov/eopss/docs/mptc/supreme-court-ruling-on-wurie-case.pdf (Massachusetts’ legal update outlining the Riley decision and its discussion of Faraday bags, referring police to their department’s legal advisor or supervisor for guidance on how to apply the case law); Noah
Faraday Bags as one of two required solutions for police to use when taking a phone into evidence.\textsuperscript{91} Where states have not encouraged the use of Faraday Bags as a statewide policy, some localities in those states have nonetheless taken action on their own. Examples include Gaston County, North Carolina,\textsuperscript{92} Savannah, Georgia,\textsuperscript{93} and Greenville, Massachusetts.\textsuperscript{94}


\textsuperscript{91} W. Va. Code St. R. § 149-7-6.4.6.3.F.1(a)


When jurisdictions voluntarily require or recommend their officers use Faraday Bags, the police department bears the cost of implementing such technology. This cost would include both the price of the Faraday Bags as well as the cost of training, though the training cost would be minimal due to the simplicity of Faraday Bags. As with all technology, the price of the actual bag varies greatly.\textsuperscript{95} Digital forensic equipment retailers, such as the company EDEC, sell basic windowless Faraday Bags for $32.00, larger and more sophisticated windowed bags for $195.00 and Faraday duffle bags for $259.00.\textsuperscript{96} Other stores sell Faraday Bags from $19.95 to $37.97,\textsuperscript{97}

\begin{itemize}
\item\textsuperscript{94} George Graham, \textit{Greenfield Police Turn to Microwave Ovens as Improvised Faraday Cages as Department Adjusts to U.S. Supreme Court Ruling Requiring Warrants for Cell Phone Searches}, \textsc{Mass Live} (July 11, 2014, 1:19 PM), \url{http://www.masslive.com/news/index.ssf/2014/07/greenfield_police_turn_to_micr.html} (noting the use of Faraday bags as a method of complying with \textit{Riley}, but requested donations of microwave ovens out of cost concerns).
\item\textsuperscript{95} See \textsc{Amazon}, \url{http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=faraday+bags} (last visited February 2, 2015).
\item\textsuperscript{96} EDEC, \url{http://www.edecdf.com/store/Faraday-bags/Faraday-bags.html} (last visited Oct. 7, 2014).
\item\textsuperscript{97} \textsc{WND Superstore}, \url{http://superstore.wnd.com/homefront/EMP-Faraday-Bags} (last visited Oct. 7, 2014).
\end{itemize}
and Amazon sells them anywhere from $2.00 to $195.00. While some believe the Riley ruling “has the potential to strain police department budgets because the commercial Faraday Bags cost upwards of $50 each, just to shield a single phone,” Gershowitz claims “anyone can purchase a Faraday Bag for as little as thirty dollars, and police departments would likely get a better price if they bought in bulk.” As Faraday Bags come into greater use, their price will probably drop, but for the purposes of this cost/benefit discussion this Comment shall assume police use the EDEC Black Hole Faraday Bag Standard Non-Window ($32.00) and the EDEC Black Hole Faraday Bag Standard Window ($52.00).

To calculate costs, one must know the size of the implementing police force. Police forces range from the one sworn officer in Gaines Township, Michigan, to the forty thousand

98 AMAZON, http://www.amazon.com/s/ref=sr_pg_1?rh=i%3Aaps%2Ck%3AFaraday+bag&keywords=Faraday+bag&ie=UTF8&qid=1412731772 (last visited Oct. 7, 2014). Amazon advertises a mobile phone blocking bag, described as a basic Faraday cage, made by Crime Scene for $2.00 while the previously mentioned Extra Large Windowed Black Hole Faraday Bag – RF Signal Isolation by EDEC is priced at $195.00

99 Graham, supra note 94.

100 Gershowitz, supra note 79, at 607.

101 EDEC, http://www.edecdf.com/store/Faraday-bags/Faraday-bags.html (last visited Oct. 7, 2014). These two bags were chosen because they are both the standard bag that an actual forensic evidence retailer sells—one with a window so you cannot see any outside interaction on the phone and one with a window so you can see any outside interaction with the phone—and it seems to mirror what Gershowitz considers cost effective as well as Graham’s potential burden.
sworn officers in the New York City Police Department.\textsuperscript{102} To consider the total cost of Faraday Bags for a department, five representative cities have been chosen: New York, Chicago, Atlanta, Pittsburgh, and Knoxville. The figures below represent the costs for each department to equip and train officers in the use of Faraday Bags.

\textsuperscript{102} America’s Largest Police Departments, LAWENFORCEMENTEDU.NET (March 27, 2014), http://www.lawenforcementedu.net/2014/03/americas-largest-police-departments/ (The next three largest police departments are Chicago Police Department with twelve thousand sworn officers, the Los Angeles Police Department with just over ten thousand sworn officers, the Philadelphia Police Department with over six thousand sworn officers); John Carlisle, \textit{One-Man Police Force Protects Small Mich. Town}, USA TODAY (May 5, 2013, 2:39 AM), http://www.usatoday.com/story/news/nation/2013/05/05/one-man-police-force/2135569/.
Figure 1. Cost of Faraday Bags to Police Departments

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Number of Sworn Officers</th>
<th>Cost of EDEC Black Hole Faraday Bag Standard Non-Window ($32.00)</th>
<th>Cost of EDEC Black Hole Faraday Bag Standard Window ($58.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>44,000&lt;sup&gt;103&lt;/sup&gt;</td>
<td>$1,408,000</td>
<td>$2,552,000</td>
</tr>
<tr>
<td>Chicago</td>
<td>12,000&lt;sup&gt;104&lt;/sup&gt;</td>
<td>$384,000</td>
<td>$696,000</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,000&lt;sup&gt;105&lt;/sup&gt;</td>
<td>$64,000</td>
<td>$116,000</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>900&lt;sup&gt;106&lt;/sup&gt;</td>
<td>$28,800</td>
<td>$52,200</td>
</tr>
<tr>
<td>Knoxville</td>
<td>400&lt;sup&gt;107&lt;/sup&gt;</td>
<td>$12,800</td>
<td>$23,200</td>
</tr>
</tbody>
</table>

Figure 1 shows the costs of purchasing Faraday Bags for every sworn officer in each police department, costing at most $2.5 million for New York, $696,000 for Chicago, $116,000 for Atlanta, $52,200 for Pittsburgh, and $23,200 for Knoxville. Beyond the cost of the equipment, officers would have to be trained in its use. Figure 2 shows the cost of such training.

<sup>103</sup> America’s Largest Police Departments, LAWENFORCEMENTEDU.NET (March 27, 2014), http://www.lawenforcementedu.net/2014/03/americas-largest-police-departments/.

<sup>104</sup> Id.


Table: Costs of Faraday Bag Training to Police Departments

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Number of Sworn Officers</th>
<th>Average Salary of a Sworn Officer</th>
<th>Hourly Wage from Salary</th>
<th>Cost of Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>44,000</td>
<td>~$68,558.50</td>
<td>~$32.96</td>
<td>$1,450,240.00</td>
</tr>
<tr>
<td>Chicago</td>
<td>12,000</td>
<td>~$66,123.00</td>
<td>~$31.79</td>
<td>$381,480.00</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,000</td>
<td>~$48,108.74</td>
<td>~$23.13</td>
<td>$46,260.00</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>900</td>
<td>$50,169.00</td>
<td>$24.12</td>
<td>$21,708.00</td>
</tr>
<tr>
<td>Knoxville</td>
<td>400</td>
<td>$46,268.00</td>
<td>$22.24</td>
<td>$8,896.00</td>
</tr>
</tbody>
</table>

108 The training would be minimal at best so the cost has been ascertained by determining the average hourly wage of a sworn police officer in the discussed precincts, and multiplying the cost of an hour of training by the number of officers.

109 The average was calculated by adding the total pay of a police officer after six months employment ($46,288) to the total pay of a police officer after five and a half years of employment ($90,829), then dividing the sum by two. NYPD RECRUIT, http://www.nypdrecruit.com/benefits-salary/overview (last visited Oct. 8, 2014).

110 The average was calculated by adding the entry pay of a police officer ($43,104) and the highest pay of a police officer who has been with the force for thirty years ($89,142), then dividing the sum by two. CHI. POLICE DEP’T DIRECTIVES SYSTEM, http://directives.chicagopolice.org/forms/CPD-61.400.pdf (last visited Oct. 8, 2014).

111 The average was calculated by adding the starting salary and top salary of Police Officers with each degree, then dividing the sum by six. CITY OF ATLANTA POLICE, https://www.joinatlantapd.org/salaryandbenefits.htm (last visited Oct. 8, 2014).

Figure 2 shows that providing one hour of training to each officer would cost New York $1,450,240, Chicago $381,480.00, Atlanta $46,260, Pittsburgh $21,708, and Knoxville $8,896.00. The cost is based on the average hourly rate for detectives in each department. Figure 2 does not take into account current trainees at the police academy, but the training could be made as part of the trainee’s curriculum and would thus be negligible. Ideally, police precincts could circulate an interoffice memo explaining what a Faraday bag does, how it is used, and when to use it since the technology is simple. Figure 3 shows the combined cost of the equipment and training.

Figure 3. Total Cost of Faraday Bags and Training to Police Departments

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Budget</th>
<th>EDEC Black Hole Faraday Bag Standard Non-Window ($32.00) and Training</th>
<th>EDEC Black Hole Faraday Bag Standard Window ($58.00) and Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>$4.678 billion</td>
<td>$2,858,240 (0.06%)</td>
<td>$4,002,240 (0.09%)</td>
</tr>
<tr>
<td>Chicago</td>
<td>$1.29 billion</td>
<td>$765,480 (0.07%)</td>
<td>$1,077,480 (0.10%)</td>
</tr>
<tr>
<td>Atlanta</td>
<td>$164 million</td>
<td>$110,260 (0.07%)</td>
<td>$162,260 (0.10%)</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>$72,346,870</td>
<td>$50,508 (0.07%)</td>
<td>$73,908 (0.10%)</td>
</tr>
<tr>
<td>Knoxville</td>
<td>$56,322,240</td>
<td>$21,696 (0.04%)</td>
<td>$32,096 (0.06%)</td>
</tr>
</tbody>
</table>

114 Note: The percentages are simply the total percentage of the city’s budget that would be required.


In summation, the cost of giving every sworn officer just one Faraday Bag and training him or her is a negligible part of a department’s annual budget, no matter the size of a city. For lower priced Faraday Bags, it would cost each city approximately 0.04 percent to 0.07 percent of its budget, and for the higher priced bag the cost would be 0.06 percent to 0.10 percent of each city’s police budget. These bags are reusable, meaning precincts would not have to allocate 0.04 percent to 0.10 percent of their budget each year.

Granted, devoting a portion of a department’s budget to purchasing Faraday Bags means that departments will have to reduce spending in other areas, such as purchasing new patrol cars, but the above costs are the worst case scenario. Police departments will likely get a discount on Faraday Bags for purchasing them in bulk, and not every officer needs a Faraday Bag. For example, most officers will not be conducting cell phone searches, so only officers involved in narcotic units, patrolling high crime areas with heavy narcotics dealing, officers investigating child pornography, and officers that investigate white collar cases would need the technology, as these specific officers are constantly investigating crimes that rely on the use of cell phones. Most officers however, such as the ordinary traffic cop, will rarely encounter situations requiring a cell phone search because traffic stops are minimal, unrelated to cell phones, and typically end in a citation. If a traffic officer without a Faraday Bag finds himself or herself in a situation


121 Gershowitz, supra note 79, at 607; Graham, supra note 94.

122 Gershowitz, supra note 79, at 607.

123 Id.
like *Riley*, he or she can simply turn the phone on airplane mode and request an officer with a Faraday Bag to assist, or search the phone at the scene if exigent circumstances arise.\(^{124}\) By obtaining a bulk discount and specifying which officers need Faraday Bags, the cost of using Faraday Bags could be cut significantly.\(^ {125}\)

A police department can also save money by releasing a memorandum or training guide on using Faraday Bags as opposed to providing physical training for an hour, eliminating the training cost entirely. Finally, if a police department truly cannot afford the necessary number of Faraday Bags in one purchase, it can buy supplemental rolls of aluminum foil for $2.00 or request a grant from the U.S. Department of Justice Office of Justice Programs or Community Oriented Police Services Office.\(^ {126}\) Ultimately, 0.04 percent to 0.10 percent of a department’s budget seems minimal compared to the benefits that the widespread use of Faraday Bags will provide to both citizens’ rights and the police.

Because cell phones are a commonly carried item today, the benefits of Faraday Bags are numerous. Faraday Bags protect citizens’ privacy in digital data. While it is true that, in the wake of *Riley*, police are required to obtain a warrant before searching the digital information on a cell phone, this ruling does not strictly prohibit police from searching a phone on site; instead this decision requires an applicable warrant exception, such as exigent circumstances, before such officers can search a phone without a warrant.\(^ {127}\) If officers are equipped with Faraday Bags,

\(^{124}\) Dunnagan & Schroader, *supra* note 84; Gershowitz, *supra* note 79, at 607.

\(^{125}\) *Riley*, 134 S. Ct. at 2487.


\(^{127}\) *Riley*, 134 S. Ct. at 2481-2482.
police will no longer have to fear destruction of digital evidence through remote wiping. On the
law enforcement side, Faraday Bags will help preserve evidence by preventing third-party
tampering or wiping of the phone. Faraday Bags may also save officer resources and judicial
resources because, if police place phones in Faraday Bags and obtain a warrant as required, they
will face fewer challenges to the evidence and will spend less time in court. By reducing
officers’ time in court and by lessening the number of suppression motions, a department and its
municipality will save money, which could be used to supplement the costs of Faraday Bags.

Despite the aforementioned benefits, Faraday Bags are not universally regarded as a cost
effective solution to warrantless cell phone searches. For example, one critic emphasizes that the
Faraday Bag is only effective while the phone is in the bag; hence police not only need “cheap
Faraday Bags but also Faraday rooms or other specialized equipment” at a police precinct or
forensics lab that allows officers to remove the phone from the bag and search it while it is in
police custody without making it vulnerable to remote wiping.128 As a simpler solution to this
criticism, officers can place the phone on airplane mode before placing it in the Faraday Bag,
turning off all cell phone service to the phone.129 Thus, the cell phone is not active when it is
removed for the search. Another solution is to purchase a sophisticated Faraday Bag with built-in
USB connection ports and touch screen technology, allowing an officer to search a phone while

128 Adam Liptak, Supreme Court Taking Up Police Searches of Data Troves Known as
Cellphones, N.Y. TIMES, Apr. 28, 2014, at A12, available at
known-as-cellphones.html?_r=1.

129 Dunnagan & Schroader, supra note 84.
it is bagged. While these sophisticated Faraday Bags raise costs slightly, precincts would only need a few at the station into which police can transfer their seized phones. A third solution is to adopt *Law Officer Magazine*’s suggestion and buy a Faraday room—a structure the size of a small tent or room capable of blocking cell phone signals and allowing the officers to search the phones without fear of loss of data—though this solution is probably unnecessary and would be better reserved for actual forensic labs.

A second critic suggests that Faraday Bags will not protect data that is pre-programmed to be deleted after a certain amount of time. This criticism can be solved by one of two simple solutions. First, if data will be erased immediately, the police officer may try to obtain consent or rely on the exigent circumstances warrant exception to search a phone before deletion occurs. The success of the warrant exception would depend on the facts of each case. Second, if information will be deleted in a number of days, police can simply take the phone to the precinct.

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131 EDEC, http://www.edecdf.com/store/faraday-tents.html (last visited Oct. 9, 2014) (requires to call or email the company for a quote, but a sales representative quoted it at $17,980); *See* E-mail from Ryan Judy, Sales Manager, EDEC, to author (October 9, 2014, 4:13 PM EST) (on file with author). The Faraday tent is obviously not the best solution for precincts, but if a forensics lab were to use them, they could immediately send all Faraday Bags back to the police upon receiving the phone.

in a Faraday Bag and use a device that instantly copies its data onto a police server. While this process will increase costs, any increased expenditure would be minimal because a police precinct would only need one or two devices at the precinct itself. Thus, the aforementioned concerns are not strong enough to prohibit a rule requiring the use of Faraday Bags. In conclusion, requiring police to implement Faraday Bags in the field is a feasible, practical, and cost effective solution to protect citizens’ rights. Thus, Faraday Bags are one of many cost efficient publicly available technologies in existence that police should be required to use to protect citizens’ rights.

B. Body Cameras: An Objective Monitor over Citizen-Police Interactions

Dr. Barak Ariel and Chief Tony Farrar of the Rialto, California Police Department described Taser Inc. body worn cameras as light, small, capable of mounting to the officer in various ways, water resistant, and in full color with a twelve hour battery life. Unlike Faraday Bags, “[b]ody-mounted police cameras are in their infancy, but they are built on tech trends long in the making, including the miniaturization of cameras and the rapid decline in prices of online

133 Id. (Gershoytiz offers Cellebrite UFED technology as a solution because it can instantly download the contents of the phone).

storage that has given consumers Dropcam and Google Glass.”

Thus, while implementation of body worn cameras in law enforcement is just gaining momentum, the technology has been publicly available for some time to meet the Kyllo requirement. If departments required police to wear these cameras, every interaction between a police officer and a citizen would be recorded, saved, and archived as digital evidence, which can be viewed if an officer’s behavior is ever called into question. Recording police-citizen interactions builds on several pre-existing foundations: audio recording equipment on officers, the cameras on electric weapons that activate when armed, and police cruiser dashboard cams. Furthermore, body cameras are already being specifically manufactured for law enforcement and tested in the field, as discussed below.


136 See GoPRO,
http://shop.gopro.com/cameras?gclid=Cj0KEQjwidKiBRCevbT6yeqPrJQBEiQA1iM2WeE8UYL60afIpzPWbokz0yn2YB3Jrb0hoShiTU_gUVgaAj0e8P8HAQ (a line of small HD cameras that can be mounted to vehicles, helmets, or your chest).

At a general law enforcement level, Sgt. Charles E. Humes Jr. published an article in *Law Officer Magazine* endorsing the use of body worn cameras, believing they will become as common as dashboard cams within the next two years because video perceptions are more accurate than eyewitnesses or participant recollection of an event.\(^{138}\) At the federal level, the federal government has not required body cameras to be worn by federal agents, but the Department of Justice stated that “[t]he Department [of Justice] will continue to support the use of video technology, review and evaluate law enforcement agencies that use it, and engage in discussions to answer the questions [about] the manner in which this technology impacts policing, communities, and public safety.”\(^{139}\) In fact, in December 2014, President Obama


proposed a “$263 million program to reform U.S. law enforcement, which includes $75 million that would be allocated to helping police departments purchase 50,000 body cameras.”

Adoption at the state level has been piecemeal. To date, no state has specifically required that police wear body cameras, but a number of jurisdictions have begun implementing them as a matter of department policy, including four jurisdictions in Arizona, four jurisdictions in California, three jurisdictions in Florida, Cook County Sheriff’s Office (Illinois), New


142 Rialto, Modest, San Francisco Bay Area Transit System Police, Department, and San Diego. ARIEL & FARRAR, supra note 134, at 6; Stross, supra note 137; E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Oct. 21, 2014, 12:24 PM EST) (on file with author).

143 Fort Meyers, Miami Beach, and Daytona Beach. Amy Tardif, Florida Police Use Body Cameras (Sept. 23, 2014, 2:54 PM),

144 E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Oct. 21, 2014, 12:24 PM EST) (on file with author).
Orleans (Louisiana), Laurel (Maryland), three jurisdictions in Michigan, Ferguson (Missouri), Las Vegas Metropolitan Police Department (Nevada), Albuquerque (New Mexico), New York City (New York), Greensboro (North Carolina), Winston-Salem (North Carolina), Pittsburgh (Pennsylvania), Fort Worth (Texas), Salt Lake City (Utah), and Seattle.

145 Id.


148 Ferguson’s body camera requirement was imposed after the Michael Brown incident.


150 E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Oct. 21, 2014, 12:24 PM EST) (on file with author).

151 Young, *supra* note 146.

152 E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Oct. 21, 2014, 12:24 PM EST) (on file with author).
Moreover, fifty police departments in Massachusetts are considering implementing body cameras, along with Boston, which has attempted to implement them in the past. Similarly, Baltimore is considering legislation to make it a city law.

At the time of this writing, jurisdictions that use body cameras do so by choice, not by law, and thus their costs presumably fall on police precincts that employ them. The costs associated with body cameras include the price of the actual device, the cost of cloud data storage, and the cost of training for the officers, which are discussed below. For purposes of this discussion, two types of body cameras manufactured by Taser will be used to assess costs: the AXON Body and the AXON Flex. The AXON Body, priced at $399.00, is described as a durable on-officer camera with a 130-degree wide-angle lens capable of capturing footage even in low-lit areas, and twelve hour battery life. It is mounted directly to the officer’s body by

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153 Stross, supra note 137.
156 Young, supra note 146.
157 These devices have been chosen because body cameras are a rather new innovation for police and these have been used in practice.
way of his utility belt or uniform shirt pocket.\textsuperscript{159} In contrast, the AXON Flex, priced at $599.00, is a point-of-view camera that attaches directly to Oakley sunglasses, headbands, collars, ball caps, and helmets.\textsuperscript{160} It has a 71 degree lens, boasts a twelve-hour battery life, and can record in low-light settings.\textsuperscript{161}

Aside from the device itself, these cameras also require software that uploads the footage to the cloud server on Evidence.com, unless the actual precinct has digital evidence storage programs in place.\textsuperscript{162} Evidence.com offers four different cloud storage monthly plans that charge per user.\textsuperscript{163} These include Basic ($15/month for 5 GB of storage), Standard ($25/month for 10 GB of storage), Pro ($39/month for 15 GB of storage, and Ultimate ($55/month for 20 GB of storage).\textsuperscript{164} Each data plan comes with different features, meaning the more a precinct pays, the more features it gets. For the purposes of this discussion, the Basic plan and the Ultimate plan will be used in order to get a sense of both the highest cost and lowest cost. The Basic plan’s features include secure evidence storage, basic management tools, EVIDENCE Mobile App, and Audit trails, while the Ultimate plan includes the Basic features and collaboration tools, bulk

\textsuperscript{159} Id.


\textsuperscript{161} Id.

\textsuperscript{162} Id.


\textsuperscript{164} Id.
actions, administrator roles, power administrator roles, pro data management, agency analytics, AXON upgrade every 2.5 years, full AXON camera warranty, and support and maintenance.  

Finally, the last cost policymakers must consider before implementing these cameras is the cost of training. Steve Tuttle, Vice President of Strategic Communications at Taser, compared it to double-clicking a mouse. When an officer double-clicks the control switch, he or she activates an “event.” When an event is activated, a red LED light turns on and the camera beeps twice to signal it is recording. The event immediately begins recording audio and video, but the body camera also frontloads the event with footage from the thirty-second buffer (the thirty seconds that was recorded immediately before activating the event). However, the buffer does not include audio. This event records until the officer presses and holds the control-switch for five continuous seconds. If an officer double-clicks the control

\footnotesize

\footnotesize 165 *Id.*

\footnotesize 166 E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Nov. 3, 2014, 3:39 PM EST) (on file with author).

\footnotesize 167 *Id.*

\footnotesize 168 *Id.*

\footnotesize 169 *Id.*

\footnotesize 170 *Id.*

\footnotesize 171 *Id.*
switch a second time, a second event is created. The officer can then view these event videos on an iOS or Android smart phone and can even add notes, interviews, and information to supplement the video. When the officer’s shift is over, he or she must connect the camera to the charger so that the information can be uploaded to the Evidence.com cloud server. Once all videos are uploaded, the camera deletes the audio and video footage off of its internal storage device.

Because these cameras are rather simple to use, training has been limited to one hour. The three figures below represent the costs of implementing body cameras for each of the five representative police departments.

172 E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Nov. 3, 2014, 3:39 PM EST) (on file with author).

173 Id.

174 Id.

175 Id.
Figure 4 represents the cost of the equipment and cloud storage for each police department. At most it would cost New York $26,356,000, Chicago $7,188,000, Atlanta $1,198,000, Pittsburgh $539,100, and Knoxville $239,600 for the equipment. As for the cost of cloud storage, it would cost New York $2,420,000, Chicago $660,000, Atlanta $110,000, Pittsburgh $49,500, and Knoxville $22,000 per month for ultimate plan. The training costs appear in Figure 5.

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<table>
<thead>
<tr>
<th>Police Department</th>
<th>Number of Sworn Officers(^{176})</th>
<th>AXON BODY ($399)</th>
<th>Axon Flex ($599)</th>
<th>Evidence.com Basic Plan per officer(^{177}) ($15/month)</th>
<th>Evidence.com Ultimate plan per officer ($55/month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>44,000</td>
<td>$17,556,000</td>
<td>$26,356,000</td>
<td>$660,000/month</td>
<td>$2,420,000/month</td>
</tr>
<tr>
<td>Chicago</td>
<td>12,000</td>
<td>$4,788,000</td>
<td>$7,188,000</td>
<td>$180,000/month</td>
<td>$660,000/month</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,000</td>
<td>$798,000</td>
<td>$1,198,000</td>
<td>$30,000/month</td>
<td>$110,000/month</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>900</td>
<td>$359,100</td>
<td>$539,100</td>
<td>$13,500/month</td>
<td>$49,500/month</td>
</tr>
<tr>
<td>Knoxville</td>
<td>400</td>
<td>$159,600</td>
<td>$239,600</td>
<td>$6,000/month</td>
<td>$22,000/month</td>
</tr>
</tbody>
</table>

\(^{176}\) *Supra* notes 103-107.

\(^{177}\) Evidence.com states that agencies should choose the storage level that is best for the agency’s users, and lists the price of the plan per user, showing that the plan is required for each officer with a camera.
Figure 5 shows that providing one hour of training to each officer would cost New York $1,450,240, Chicago $381,480.00, Atlanta $46,260, Pittsburgh $21,708, and Knoxville $8,896.00. The cost is based on the average hourly rate for officers in each department. Figure 6 shows the total cost of body cameras and training to police departments.

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Number of Sworn Officers</th>
<th>Average Salary of a Sworn Officer</th>
<th>Hourly Wage from Salary</th>
<th>Cost of Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>44,000</td>
<td>~$68,558.50</td>
<td>~$32.96</td>
<td>$1,450,240.00</td>
</tr>
<tr>
<td>Chicago</td>
<td>12,000</td>
<td>~$66,123.00</td>
<td>~$31.79</td>
<td>$381,480.00</td>
</tr>
<tr>
<td>Atlanta</td>
<td>2,000</td>
<td>~$48,108.74</td>
<td>~$23.13</td>
<td>$46,260.00</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>900</td>
<td>$50,169.00</td>
<td>$24.12</td>
<td>$21,708.00</td>
</tr>
<tr>
<td>Knoxville</td>
<td>400</td>
<td>$46,268.00</td>
<td>$22.24</td>
<td>$8,896.00</td>
</tr>
</tbody>
</table>

**Figure 6. Total Cost of Body Cameras and Training to Police Departments**

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Budget (^{181})</th>
<th>AXON Body ($399) and Training</th>
<th>AXON Flex ($599) and Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>$4.678 billion</td>
<td>$19,006,240 (0.41%)</td>
<td>$27,806,240 (0.59%)</td>
</tr>
<tr>
<td>Chicago</td>
<td>$1.29 billion</td>
<td>$5,169,480 (0.5%)</td>
<td>$7,569,480 (0.74%)</td>
</tr>
<tr>
<td>Atlanta</td>
<td>$164 million</td>
<td>$844,260 (0.51%)</td>
<td>$1,244,260 (0.76%)</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>$72,346,870</td>
<td>$380,808 (0.53%)</td>
<td>$560,808 (0.78%)</td>
</tr>
<tr>
<td>Knoxville</td>
<td>$56,322,240</td>
<td>$168,496 (0.3%)</td>
<td>$248,496 (0.44%)</td>
</tr>
</tbody>
</table>

\(^{178}\) Supra notes 103-107.

\(^{179}\) Supra notes 109-113.

\(^{180}\) Note: The percentages are simply the total percentage of the city’s budget that would be required.

\(^{181}\) Supra notes 115-119.119
Figure 6 shows that purchasing the equipment and training officers would cost New York 0.59 percent of its budget, Chicago 0.74 percent of its budget, Atlanta 0.76 percent of its budget, Pittsburgh 0.78 percent of its budget, and Knoxville 0.44 percent of its budget at most. Figure 7 shows the cost of cloud storage.

![Figure 7. Total Yearly Cost of Cloud Software](image)

<table>
<thead>
<tr>
<th>Police Department</th>
<th>Budget(^{183})</th>
<th>Yearly Basic Plan (($15/\text{month}))</th>
<th>Yearly Ultimate Plan (($55/\text{month}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>$4.678 billion</td>
<td>$7,920,000 (0.17%)</td>
<td>$29,040,000 (0.62%)</td>
</tr>
<tr>
<td>Chicago</td>
<td>$1.29 billion</td>
<td>$2,160,000 (0.21%)</td>
<td>$7,920,000 (0.77%)</td>
</tr>
<tr>
<td>Atlanta</td>
<td>$164 million</td>
<td>$360,000 (0.22%)</td>
<td>$1,320,000 (0.80%)</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>$72,346,870</td>
<td>$162,000 (0.22%)</td>
<td>$594,000 (0.82%)</td>
</tr>
<tr>
<td>Knoxville</td>
<td>$56,322,240</td>
<td>$72,000 (0.13%)</td>
<td>$264,000 (0.47%)</td>
</tr>
</tbody>
</table>

Figure 7 shows that the highest annual cost for cloud storage to each department would implicate 0.62 percent of New York’s budget, 0.77 percent of Chicago’s budget, 0.80 percent of Atlanta’s budget, 0.82 percent of Pittsburgh’s budget, and 0.47 percent of Knoxville’s budget.

If one combines the Figure 6 AXON Flex Camera and Training totals with the Figure 7 Yearly Ultimate Plan, the cost of implementing body cameras is $56,846,240.00 for New York Police Department, $15,489,480.00 for Chicago Police Department, $2,564,260.00 for Atlanta Police Department, $1,154,808.00 for Pittsburgh Police Department, and $512,496.00 for Knoxville Police Department. This is by no means a small amount of money, but it is only 1.21 percent, 1.51 percent, 1.56 percent, 1.60 percent, and 0.91 percent of each department’s total annual budget. More importantly, these costs are the worst case scenario. Once the equipment is

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\(^{182}\) Note: The percentages are simply the total percentage of the city’s budget that would be required.

\(^{183}\) Supra notes 115-119.119
purchased, the only reoccurring cost is the yearly data plan. If a precinct wishes to minimize the yearly cloud storage charge, it can create its own digital evidence storage program and save money by avoiding the reoccurring monthly costs.\textsuperscript{184} Furthermore, precincts can minimize this cost by choosing the AXON Body camera or the Basic data plan, depending on the department’s needs. If a department is truly concerned about funding, it may request a grant from the U.S. Department of Justice Office of Justice Programs or Community Oriented Police Services Office.\textsuperscript{185} Regardless, the benefits of the body cameras justify this cost.

The benefits of body cameras are becoming increasingly important because they act as safeguards to both citizens and police. If police are required to wear body cameras at all times, citizens will have greater protection during field encounters with officers, ultimately reducing officer misconduct and complaints.\textsuperscript{186} For example, if a police officer exceeds the scope of a Terry stop or searches a phone without a warrant in the wake of Riley, his or her actions will be recorded and the citizen’s Fourth Amendment rights will be protected. If the officer goes beyond the scope of a warrant and seizes items without probable cause, these will be excluded at trial.\textsuperscript{187} Similarly, if an officer begins questioning a suspect in the field without giving Miranda warnings or continues questioning after a suspect has invoked his or her rights, the citizen’s Fifth Amendment rights will be protected and the statements will be excluded from the case-in-chief if

\textsuperscript{184} T\textsc{aser}, \textit{supra} note 160.

\textsuperscript{185} \textsc{The U.S. Dep’t of Justice}, \url{http://www.justice.gov/business} (last visited Oct. 24, 2014).

\textsuperscript{186} \textsc{Ariel \& Farrar}, \textit{supra} note 134, at 9.

\textsuperscript{187} \textsc{Mapp v. Ohio}, 367 U.S. 643, 655 (1961) (holding “all evidence obtained in violation of the Constitution, is, by that same authority, inadmissible in a state court”).
he or she is ultimately prosecuted.\textsuperscript{188} This constant monitoring will also serve as a deterrent for police misconduct, discouraging officers from overreaching or taking risky action in the field because they know they will be held accountable for such actions the moment a citizen complains and the relevant footage is viewed by supervisors. Finally, use of cameras will increase the civility of interactions between citizens and police by reducing the use of unnecessary force.\textsuperscript{189}

Citizens are not the only beneficiaries of body cameras. On the law enforcement side of the equation, police have an objective record of all interactions with citizens, which will help deter officer complaints and exonerate those officers who are falsely accused of property theft during searches or of violating constitutional rights.\textsuperscript{190} In turn, use of cameras will prevent frivolous litigation over the suppression of evidence that the officer lawfully obtained, reducing paid time in court and litigation costs for the jurisdiction.\textsuperscript{191} These savings will help offset some of the costs of implementing the technology. Use of cameras may also encourage citizens to act more cooperatively with the police if they know they are being filmed.\textsuperscript{192} Due to the double deterrence effect of preventing police from overreaching and causing citizens to act more


\textsuperscript{190} \textsc{Ariel \& Farrar}, \textit{supra} note 134, at 8.

\textsuperscript{191} \textsc{Ramirez}, \textit{supra} note 189, at 9.

\textsuperscript{192} \textsc{Ariel \& Farrar}, \textit{supra} note 134, at 10.
cooperatively, there should be a reduction in officer complaints and fewer internal investigations for the precinct.\textsuperscript{193}

These effects were observed in the Rialto study.\textsuperscript{194} The Rialto study found a decrease in use of force complaints from seventy in 2009 to twenty-five in 2013, and a drop in citizen complaints about police behavior from thirty-six in 2009 to three in 2013.\textsuperscript{195} Most importantly, the use of body cameras can prevent officers from being subjected to disciplinary action, criminal suits, and civil suits arising from excessive force claims, because internal affairs and the courts will be able to view the situation from the officer’s point of view rather than simply relying on stories and videos taken by witnesses who may not have been as observant as the officer. In fact, Evidence.com even created a calculator for police departments to determine how much departments will save on legal fees, use of force complaints, and workers compensation.\textsuperscript{196}

\begin{flushleft}
\textsuperscript{193} \textsc{Ramirez}, supra note 189, at 9.
\textsuperscript{194} \textsc{Ariel} \& \textsc{Farrar}, supra note 134, at 11.
\textsuperscript{195} \textit{Id}.
\textsuperscript{196} New York would save ~$102,471,069 and would receive a two hundred and fifty eight percent return on its total investment. Chicago would save ~$27,946,933 and would have a two hundred and fifty five percent return on its total investment. Atlanta would save ~$4,659,864 and would receive a two hundred and thirty three percent return on its total investment. Pittsburgh would save ~$2,097,284 and receive a two hundred and forty one percent return on its total investment. Knoxville would save ~$932,892 and would receive a two hundred and forty one percent return on its total investment. \textsc{Evidence.com}, http://www.evidence.com/roi-calculator/ (last visited Nov. 2, 2014) (calculates legal, complaints, use of force, works compensation educations,
\end{flushleft}
By having the tools to monitor field interactions between a police officer and a citizen, society will be able to hold police officers accountable for improper actions. Similarly, the public will have the information to support officers who act lawfully rather than condemn them on speculations. Holding wrongful officers accountable while vindicating officers who acted in the right will ultimately improve the relationship between police officers and their constituents.

To be fair, use of cameras does allow supervisors or internal affairs to second-guess an officer’s decisions in the field. However, the use of body cameras is not intended to replace investigations into an officer’s actions, but rather to provide one piece of evidence as to how the event transpired. So long as departments conduct full investigations into an incident in order to

officer and civilian employee savings, and cost of in-house evidence management by analyzing the number of sworn officers in a department and the average hourly officer pay rate).

197 City of Rialto Case Study, TASER 1 (2013).
198 Id.
199 Id.
200 RAMIREZ, supra note 189, at 14.
201 Id. An interesting spin placed on this concern is the issue of tunnel vision and being blinded to other details not at the officer’s immediate attention. not a word, but not sure what word you want blindness. If a plaintiff brings a suit against the officer and plays the video in court, the plaintiff may ask the officer why his recollection is missing key details without considering the fact that the officer is in a stressful situation and thus might not have the same wide perception of the video. He has tunnel vision, focusing solely on the suspect and not on the surroundings. This
determine what the officer believed and what information he or she had, an officer should not be punished simply because his or her actions were second guessed by a supervisor.202 A related and possibly more important concern is the officer over-thinking his or her own actions in the field because of the knowledge that he or she is being recorded. An officer may be reluctant to take a risky yet lawful action out of fear of being reprimanded, which may lead to a suspect escaping or the officer being injured. This potential reluctance may be mitigated by creating department policies assuring officers that any events will be fully investigated.

The largest concern posed by body cameras is the invasion of privacy such technology may produce. As Eugene Ramirez notes, the issue is twofold: privacy of citizens and privacy of officers.203 On the citizen side, organizations like the ACLU are most concerned about cameras recording innocent behavior, especially when an officer enters the privacy of someone’s home when responding to a call.204 Aside from worrying about the unnecessary capture of innocent behavior, the ACLU is also concerned about the capture of criminal (or simply embarrassing) behavior, especially if these videos are leaked online.205 Similarly, an officer’s privacy is at risk because his or her actions are constantly being recorded, whether or not he or she is interacting with a citizen or simply taking a break.206

argument supports the idea that departments must truly investigate police “misconduct” before holding them open to lawsuits. Humes, supra note 138.

202 RAMIREZ, supra note 189, at 14.

203 Id. at 15.

204 Id.

205 Id.

206 Id. at 12.
To mitigate privacy concerns, the ACLU recommends several policies to protect citizen privacy, such as limiting recording to uniformed officers so citizens know what to expect, requiring officers to notify people when they are being recorded (similar to dash cams in some states), and requiring officers to provide clear notice of a camera when entering a private home, except under exigent circumstances. The ACLU also suggests creating a department policy of asking residents whether they wish for a camera to be turned off before they enter a home in non-exigent circumstances. By notifying citizens when they are being recorded, and by restricting camera use within an individual’s home, the police will protect citizen privacy. Furthermore, because camera footage is stored for evidentiary purposes only, it will only be viewed when an officer’s actions are called into doubt; concerns for citizen privacy may, therefore, not be implicated in most cases. Unlike the number of bystander-recorded police interactions posted on YouTube, these videos have very little chance of being shared.

207 Despite its sensibility, this recommendation may not be practical to implement since different states have different consent laws. Some states require all parties to consent, whereas others do not. Even the states that have two party consent rules may have exceptions if police are in an area they are lawfully allowed to be. Regardless of the consent requirement, notifying individuals that they are being recorded will help protect privacy. RAMIREZ, supra note 189, at 5. 208 Id. at 12. 209 Id. 210 It should be noted that this could lead to potential consent issues in multiple occupant dwellings, which is why state consent laws and department policies will be crucial in governing when a camera can be used inside the home.
In response to the concern regarding officer privacy, one must remember how the body cameras work. While Taser cameras are always recording, the only footage that is saved are the officer-initiated events and the pure video of the thirty seconds before he triggers the events.\footnote{E-mail from Steve Tuttle, Vice President of Strategic Communications, Taser, to Dr. Kay Levine, Emory University School of Law Professor (Nov. 3, 2014, 3:39 PM EST) (on file with author).} Similarly, there exists no simultaneous monitoring of these recordings. The only time the footage should be viewed is when there is an officer complaint or when the officer’s actions are called into question. The camera is not activated when the officer is on his or her break or simply patrolling. Thus, an officer is not under constant surveillance. If an officer fails to double-click to activate an event when needed, then the department may reprimand him and launch its own investigation into the incident. Due to the relatively low costs and the enormous benefits of this technology, requiring police to wear and use body cameras is a very practical solution.

III. REQUIRING POLICE TO USE PUBLICLY AVAILABLE TECHNOLOGY IS BOTH A NECESSARY AND PRACTICAL SOLUTION TO PROTECT CITIZENS’ RIGHTS

This part begins by revisiting \textit{Kyllo} and \textit{Riley} as a backdrop to the proposed rule. It then looks at the total cost of implementing Faraday Bags and Body Cameras for each representative city, but explains how police departments can mitigate cost by determining which forms of the technology best meet the police department’s needs.

There is already a long history of Court cases granting and restricting police use of various technology. In \textit{Kyllo}, the Court held that the police use of readily available technology to gain information about the interior of the home, without trespassing onto the property, did not constitute a search because there is no reasonable expectation of privacy in information that can...
be obtained through such technology. In Riley, the Court held that police are unable to search the digital data of a cellphone without a warrant or warrant exception, recognizing that using alternatives, such as a publicly available Faraday Bag, can promote governmental interests while protecting citizens’ rights. The simple step of combining these two rulings creates the requirement that police should be required to use publicly available technology that protects citizens’ rights.

Up to this point, this Comment has analyzed each technology to determine whether its implementation is feasible. However, the central question presented herein is whether there should exist laws requiring police to use publicly available technology if the technology is capable of protecting citizens’ rights. If the representative police departments implemented both of the highest priced technology from Part II (the standard window Faraday Bag and the AXON Flex Camera with the ultimate cloud storage plan) it would cost New York $60.8 million, Chicago $16.6 million, Atlanta $2.7 million, Pittsburgh $1.2 million, and Knoxville $544,592. This combination of technology only costs 1.30 percent, 1.61 percent, 1.66 percent, 1.70 percent, 0.97 percent of each police department’s budget.

Furthermore, the police departments could choose to purchase the non-window Faraday Bag and the Axon Body camera with the basic plan, which would cost New York $29.8 million (0.64 percent), Chicago $8.1 million (0.78 percent), Atlanta $1.3 million (0.80 percent), Pittsburgh $593,316 (0.82 percent), and Knoxville $262,192 (0.47 percent). This cost does not include any forms of cost mitigation that have been discussed, such as creating training alternatives, choosing cheaper equipment, or creating a cloud storage program for the police

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department. It is important to note that this cost may rise as more technologies become publicly available and police departments implement them.

After viewing these costs, the main question is: who bears it? Cost spreading may be the preferred option to individual police departments, but with a fragmented police force divided between private forces, federal, state, county, and city departments with “municipal police departments providing the lion’s share of police service,” it is difficult to fairly spread the cost among the other agencies, especially when all agencies will be required to implement the equipment.\(^\text{214}\) Thus, it would be best if each city works the cost into the budget for each individual police department implementing the technology, allowing each department to completely implement the technology within three or even five years. This slow implementation gives departments the time and discretion to determine how many Faraday Bags or body cameras that they need, train officers on their use to maximize the effect of the technology, and spread the cost across multiple fiscal years. As these technologies bring a return for police departments, departments can put those savings towards purchasing new publicly available technology. If cost remains an issue, the departments can request supplemental funding from the U.S. Department of Justice Office of Justice Programs or Community Oriented Police Services Office, as discussed above.\(^\text{215}\)

The requirement being proposed is not meant to limit police departments’ discretion in choosing the type of equipment (i.e. the type of body camera or the type of Faraday Bag) that best serves their needs; it only requires that departments use equipment capable of protecting the


rights that the chosen publicly available technology is designed to protect. Requiring the use of Faraday Bags and body cameras is a cost effective and practical solution to aid citizens’ rights, but this Comment advocates beyond requiring police to only implement the two named technologies.

As technology advances, the amount of publicly available technology on the market that police can use to protect citizens’ rights will increase. Implementing these technologies is nothing new for police. Police already have a host of technology at their disposal—dash cams, interrogation room recording equipment, audio recording equipment, tazers, breathalyzers, and speed radars—that protect both citizens and police. 216 Furthermore, police already use technology that intrudes on citizens’ rights such as wiretaps and sense enhancing devices. 217 By looking at what police have already implemented and recognizing the cost effectiveness of the proposed technologies, this Comment, argues that a more general rule is not only possible, but incredibly beneficial in this technological age. Society should require that police use publicly available technology that is capable of protecting citizens’ rights. As of date, there has been piecemeal adoption by departments, cities, counties, and states to implement specific technology. Thus, the Court should establish this general rule by combining the precedents set forth in Kyllo and Riley so that citizens, police, and the judiciary may reap its benefits.

CONCLUSION

As noted, law enforcement is no stranger to technology. This Comment addressed restrictions the Court has placed on police use of technology through the Fourth Amendment,

216 Schultz, supra note 1; Strange, supra note 1.

and technology—such as dash cams and interrogation room equipment—that the police have used to yield great benefits both for citizens’ rights and themselves. This Comment has also analyzed Faraday Bags and body cameras, both of which are publicity available today, to determine both their costs and their ability to protect citizens’ rights and law enforcement. As shown, implementing Faraday Bags and body cameras is a cost efficient way to protect citizens’ Fourth and Fifth Amendment rights, but these technologies are only the beginning. In this technological age, new technology is frequently entering the market. For this reason, we should require police to use publicly available technologies that safeguard citizens’ rights.

The largest difficulty faced in the future will be discovering these new technologies and notifying jurisdictions of their benefits. The federal government should take the lead in ensuring that police departments are informed of new technology because the federal government already has programs in place that identify beneficial technologies (such as dash cams) and provide supplemental funding. Thus, the task of identifying new technologies will be two-fold. First, police departments must be vigilant in recognizing technologies that are capable of protecting citizens’ rights and experimenting with them in the field to determine if the benefits are worth the cost. The beneficial technologies should be reported to the Community Oriented Police Services Office. Second, the Department of Justice’s Community Oriented Police Services Office should undertake three tasks: research potential technological shields, identify shields discussed by independent researchers and law enforcement, and compile and maintain the list of technology and nationally distribute it to police departments. Once police departments have this list, they can be given a grace period, depending on the financial ability of the department, to obtain the make and model of the technology that best suits the department’s needs and to train officers in its use.
The requirement that police use publicly available technology capable of preserving citizens’ rights is not meant to be a straightjacket on police or a get out of jail free card for guilty citizens. Rather, the requirement is meant to be a protective shield. It will shield citizens from police tactics that degrade or destroy their rights, and it will shield police from lawsuits, department sanctions or punishments, and trials by public opinion because police will have the equipment and training to best handle citizen interactions while protecting themselves. If Ferguson police had employed technological shields during the Michael Brown incident, at best Michael Brown may still be alive today, but at worse the public would have an objective record of the transpired events to hold the officer accountable for any improper actions taken.

Society today cannot function without technology, ranging from cellphones, laptops, tablets, smart watches, cars with advanced navigation and assist capabilities, and sophisticated home appliances. Why should police forces differ? If society relies heavily on technology to make life easier, so to should police rely on technology that makes policing more effective while simultaneously protecting citizens’ rights.