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SJC-12499

COMMONWEALTH vs. JEROME ALMONOR.

Plymouth. September 5, 2018. - April 23, 2019.

Present: Gants, C.J., Lenk, Gaziano, Lowy, Budd, Cypher, & Kafker, JJ.

Cellular Telephone. Privacy. Constitutional Law, Search and seizure, Privacy. Search and Seizure, Expectation of privacy, Exigent circumstances. Practice, Criminal, Motion to suppress, Interlocutory appeal.

Indictments found and returned in the Superior Court Department on September 21, 2012.

A pretrial motion to suppress evidence was heard by Cornelius J. Moriarty, II, J.

An application for leave to prosecute an interlocutory appeal was allowed by Lowy, J., in the Supreme Judicial Court for the county of Suffolk, and the appeal was reported by him to the Appeals Court. The Supreme Judicial Court granted an application for direct appellate review.

Jessica L. Kenny, Assistant District Attorney (Nathaniel Kennedy, Assistant District Attorney, also present) for the Commonwealth.

Matthew Spurlock, Committee for Public Counsel Services (Randall K. Power also present) for the defendant.

Jennifer Lynch & Andrew Crocker, of California, Chauncey B. Wood, Christopher T. Holding, Matthew R. Segal, & Jessie J.

Rossman, for Electronic Frontier Foundation & others, amici curiae, submitted a brief.

KAFKER, J. The police quickly identified the defendant as the person suspected of murdering the victim with a sawed-off shotgun. In an attempt to pinpoint the location of the fleeing suspect, the police caused the defendant's cell phone to be "pinged."¹ They did so without a warrant. The legality of that ping in these circumstances is the central legal issue in this murder case.

The police had learned the defendant's cell phone number within approximately four hours of the shooting. After receiving this information, the police contacted the defendant's cellular service provider (service provider) to request the real-time location of his cell phone pursuant to a "mandatory information for exigent circumstances requests" form. The service provider eventually "pinged" the defendant's cell phone, an action that caused the defendant's cell phone to transmit its real-time global positioning system (GPS) coordinates to the service provider. Once received, the cell phone's GPS coordinates were relayed to police, who used the coordinates, in

¹ On request, a cellular service provider (service provider) can cause a cell phone to transmit its global positioning system (GPS) coordinates to the provider, in a process known as "pinging." See Matter of an Application of the U.S.A. for an Order Authorizing Disclosure of Location Info. of a Specified Wireless Tel., 849 F. Supp. 2d 526, 534 (D. Md. 2011).

combination with information from another witness, to identify a single address in Brockton as the defendant's likely location. Upon arriving at the Brockton address, police entered the home with the consent of the homeowner and located the defendant in an upstairs bedroom. After the defendant was arrested, police obtained and executed a search warrant for the bedroom and seized a sawed-off shotgun and a bulletproof vest as evidence of the defendant's involvement in the victim's shooting death.

The defendant moved to suppress the evidence seized by police, arguing that it was the fruit of an unlawful search under the Fourth Amendment to the United States Constitution and art. 14 of the Massachusetts Declaration of Rights. The motion judge agreed, and the defendant's suppression motion was allowed. A single justice of this court allowed the Commonwealth's application to pursue an interlocutory appeal and reported the appeal to the Appeals Court. We subsequently allowed the defendant's petition for direct appellate review.

This appeal raises an issue of first impression in Massachusetts: whether police action causing an individual's cell phone to reveal its real-time location constitutes a search in the constitutional sense under either the Fourth Amendment or art. 14. For the reasons set forth below, we conclude that, under art. 14, it does. We also conclude, however, that in the circumstances of this case, the warrantless search was supported

by probable cause and was reasonable under the exigent circumstances exception to the search warrant requirement. We therefore reverse the motion judge's allowance of the defendant's motion to suppress.^{2,3}

Background. We summarize the facts as found by the motion judge, supplemented by uncontested facts in the record implicitly credited by him. See Commonwealth v. Jones-Pannell, 472 Mass. 429, 436 (2015), citing Commonwealth v. Isaiah I., 448 Mass. 334, 337 (2007), S.C., 450 Mass. 818 (2008).

² All Justices agree that there was a search for purposes of art. 14 of the Massachusetts Declaration of Rights, and that a search without a warrant was justified on the facts of this case by the exigency exception. The majority -- the author of this opinion joined by Justices Gaziano, Lowy, Budd, and Cypher -- hold that a search occurred because the police, with the assistance of the defendant's service provider, unbeknownst to the defendant and without his consent, caused his cell phone to transmit real-time location information. Justice Lenk, joined by Chief Justice Gants, writes separately to express her concern that our analysis blurs the distinction between "search" and "seizure" by focusing primarily on a violation of the defendant's property rights (i.e., the manipulation of his cell phone) instead of the intrusion on his personal right to be let alone, especially within a private home. We address her concern infra. The Chief Justice, joined by Justices Gaziano and Lowy, writes separately as well to point out that this case illustrates the need for police to be able to seek, and courts to be able to issue, search warrants electronically in appropriate circumstances, and to encourage the Legislature to permit that to happen.

³ We acknowledge the amicus brief submitted by the Electronic Frontier Foundation; the American Civil Liberties Union of Massachusetts, Inc.; and the Massachusetts Association of Criminal Defense Lawyers.

At approximately 5:19 P.M. on August 10, 2012, a Brockton police officer responded to a reported shooting. When he arrived at the scene, the officer saw a black car in the driveway. He found the victim inside the car, unconscious, with a gunshot wound to the chest. The victim was transported to a hospital, where he was pronounced dead approximately one hour later. Police immediately began investigating the shooting.

An eyewitness to the shooting was interviewed by police at approximately 8:15 P.M. The eyewitness explained that he and the victim had been sitting in the black car parked in the driveway when a second car pulled up behind them. Two men got out of the second car and entered the house, returning to the car a few minutes later. One of the men, later identified as the defendant, "engaged in an unfriendly exchange" with the victim. Following this exchange, the defendant pulled out a shotgun wrapped in tape and told the eyewitness and the victim to empty their pockets. After some arguing, the defendant shot the victim in the chest. The defendant and the other man with whom he had arrived then entered their vehicle and left the scene. The eyewitness stated that he had a clear view of the shooter, who was only approximately ten feet away at the time of the shooting. The eyewitness later identified the defendant from a photographic array.

During the course of this initial investigation, two officers also located and interviewed a witness who revealed that the defendant had a former girlfriend. Police later learned that the defendant's former girlfriend lived at an address on a particular street in Brockton.

By 9:10 P.M., two officers interviewed the man who had been in the car with the defendant. He admitted that he had been present at the shooting and knew the defendant. At some point before the conclusion of the interview, he provided police with the defendant's cell phone number. He also informed the officers that he had dropped the defendant off at an intersection not far from the scene of the shooting and that the defendant still had the shotgun.

By 11 P.M., the police had conducted numerous witness interviews and performed multiple identifications of the defendant using photographic arrays. They learned that the shotgun was "cut down in the front." On the basis of the information they received, a police officer sent a "mandatory information for exigent circumstance requests" form to the defendant's service provider. The officer provided the defendant's cell phone number and requested several pieces of information, including the "precise location . . . (GPS

location)" of the defendant's cell phone.⁴ As grounds for the request, the officer wrote, "outstanding murder suspect, shot and killed victim with shotgun. Suspect still has shotgun." The service provider did not respond to the written request.

At approximately 12 A.M., police still had not heard from the service provider. The officer called a telephone number that the service provider maintained for law enforcement use and requested the real-time latitude and longitude coordinates of the defendant's cell phone. The service provider "pinged" the defendant's cell phone, thereby causing the cell phone to reveal its real-time GPS coordinates at the time of the ping. Once its location was revealed, the service provider relayed the cell phone's GPS coordinates to the police. The officer entered the coordinates in a common computer mapping program, which identified the cell phone as being in the "general location" of a particular street in Brockton.⁵ Having already learned that

⁴ The officer also requested subscriber information, one week's worth of call detail records with cell site information, and two weeks' worth of historical location information.

⁵ In his factual findings, the motion judge expressly found that the ping located the defendant's cell phone in the "general location" of the street in question. Although the motion judge went on to note in his discussion section that there was "no question that the [GPS] placed [the cell phone] inside a private residence," this was an incorrect conclusion inconsistent with his earlier factual finding and was therefore clear error. The record in the case supports the motion judge's factual finding on this point. Several police officers testified at the evidentiary hearing on the motion to suppress that the GPS

the defendant's former girlfriend lived at a particular address on that street, police decided to investigate the former girlfriend's address.

Less than one hour later, multiple police officers approached the defendant's former girlfriend's house, announced their presence, and knocked on the door. The homeowner, the former girlfriend's father, opened the door. He indicated that he knew the defendant but did not believe that the defendant was at the house. He said that his daughter should be upstairs in her room, and he gave police permission to go upstairs and speak with her.

When officers reached the second floor, they eventually encountered a locked door. They knocked several times and ordered anyone inside to come out. The officers heard a male voice inside the bedroom say, "Shit." The defendant eventually opened the door, wearing nothing but boxer shorts. He was ordered to the ground and arrested. Officers thereafter conducted a protective sweep of the bedroom and observed a

coordinates placed the cell phone between certain addresses on that particular street and that they only went to the specific address having already learned that the former girlfriend lived on that street. Moreover, the map relied on by police did not, as Justice Lenk's concurrence suggests, "pin-point[] . . . the location of [the particular house in which the defendant was discovered]." Post at note 8. Rather, the map included an arrow in the middle of that particular street in Brockton but did not identify that the defendant's cell phone was located inside of a specific address.

sawed-off shotgun and a bulletproof vest in plain view. They secured the scene while one officer requested a warrant to search the house. After receiving the warrant, police searched the house and seized, among other items, the shotgun and vest.

The defendant eventually moved to suppress the evidence seized from the bedroom, as well as his subsequent statements to police, on the grounds that they were the fruit of a warrantless search of the real-time location of his cell phone. After conducting a three-day evidentiary hearing, the motion judge concluded that the ping of the defendant's cell phone was a search under the Fourth Amendment and art. 14 and that the search was not justified by the exigent circumstances exception to the warrant requirement.

Discussion. When reviewing a ruling on a motion to suppress, "we accept the judge's subsidiary findings of fact absent clear error but conduct an independent review of his ultimate findings and conclusions of law" (citation omitted). Commonwealth v. Tremblay, 480 Mass. 645, 652 (2018). In assessing the propriety of the motion judge's decision, we must make the threshold determination whether the ping of the defendant's cell phone constituted a search in the constitutional sense under either the Fourth Amendment or art. 14. If it did, we must determine whether conducting the search

without a warrant was nonetheless reasonable under the exigent circumstances exception to the search warrant requirement.⁶

1. Search. The Fourth Amendment and art. 14 protect individuals from unreasonable searches and seizures. For these constitutional protections to apply, however, the Commonwealth's conduct must constitute a search in the constitutional sense. Commonwealth v. Magri, 462 Mass. 360, 366 (2012). A search in the constitutional sense occurs "when the government's conduct intrudes on a person's reasonable expectation of privacy." Commonwealth v. Augustine, 467 Mass. 230, 241 (2014), S.C., 470 Mass. 837 (2015). See Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). An individual has a reasonable expectation of privacy if (i) the individual has "manifested a subjective expectation of privacy in the object of the search," and (ii) if "society is willing to recognize that expectation as reasonable" (citation omitted). Augustine, supra at 242.

The defendant therefore bears the burden of establishing that the Commonwealth intruded on a subjective and objective expectation of privacy in his cell phone's real-time location

⁶ The Commonwealth also argues that the defendant does not have standing to challenge the lawfulness of the search of his former girlfriend's bedroom. Because the Commonwealth failed to raise this issue below, it is waived. Commonwealth v. Mauricio, 477 Mass. 588, 594 (2017) (declining to address merits of standing argument because issue had not been "meaningfully addressed" at motion to suppress hearing).

information. See Commonwealth v. Miller, 475 Mass. 212, 219 (2016). There does not appear to be a dispute as to whether the defendant manifested a subjective expectation of privacy in this information.⁷ Our analysis is therefore limited to whether this expectation of privacy was objectively reasonable.

The ubiquitous use of cell phones, and the technology allowing for the tracking of their location, have significantly enhanced the government's surveillance capabilities. Augustine, 467 Mass. at 247-248. See Carpenter v. United States, 138 S. Ct. 2206, 2214 (2018). In response, courts across the country, including our own, increasingly have been tasked with addressing whether these enhanced surveillance capabilities implicate any objectively reasonable expectations of privacy. In so doing, both this court and the United States Supreme Court have been careful to guard against the "power of technology to shrink the realm of guaranteed privacy" by emphasizing that privacy rights "cannot be left at the mercy of advancing technology but rather must be preserved and protected as new technologies are adopted

⁷ Even if there were, the defendant has met his burden. The defendant averred that he owned the cell phone "to communicate with others, not to share any detailed information, including [his] whereabouts, with the Government, or any of their agents within law enforcement." Cf. Commonwealth v. Augustine, 467 Mass. 230, 255 & n.38 (2014), S.C., 470 Mass. 837 (2015) (concluding subjective prong met where defendant averred that he acquired cell phone for personal use and never affirmatively permitted police or other law enforcement officials to access cell site location information [CSLI] records).

and applied by law enforcement" (quotation and citation omitted). Commonwealth v. Johnson, 481 Mass. 710, 716 (2019). See Kyllo v. United States, 533 U.S. 27, 34, 35 (2001); Commonwealth v. Connolly, 454 Mass. 808, 836 (2009) (Gants, J., concurring) (noting need to "establish a constitutional jurisprudence that can adapt to changes in the technology of real-time monitoring").

Neither this court nor the Supreme Court, however, has addressed the issue we confront today: whether police action that causes an individual's cell phone to transmit its real-time location intrudes on any reasonable expectations of privacy.⁸ See Carpenter, 138 S. Ct. at 2200 ("Our decision today is a narrow one. We do not express a view on matters not before us [such as] real-time [location information]"); Augustine, 467 Mass. at 240 n.24 ("we do not need to consider [real-time

⁸ Several United States Courts of Appeals have expressly avoided the issue. See, e.g., United States v. Wallace, 885 F.3d 806, 810 (5th Cir. 2018) (assuming, without deciding, that accessing cell phone's real-time location data is search under Fourth Amendment to United States Constitution); United States v. Banks, 884 F.3d 998, 1013 (10th Cir. 2018), cert. denied, 139 S. Ct. 638 (same); United States v. Caraballo, 831 F.3d 95, 102 (2d Cir. 2016), cert. denied, 137 S. Ct. 654 (2017) (same). The United States Court of Appeals for the Sixth Circuit, however, has held that no search occurs when the government acquires a cell phone's real-time GPS location while the cell phone is in public. United States v. Riley, 858 F.3d 1012, 1018 (6th Cir. 2017), cert. denied, 138 S. Ct. 2705 (2018) (concluding that ping did not constitute search because "tracking [did] not reveal movements within the home" [emphasis in original]).

location information] in the present case"). For the reasons set forth below, we conclude that under art. 14, it does.⁹

In analyzing society's reasonable expectations of privacy, this court considers "various factors," including the "nature of the intrusion."^{10,11} Commonwealth v. One 1985 Ford Thunderbird

⁹ As we have noted, this issue remains an open question as a matter of Fourth Amendment jurisprudence. Nevertheless, as we conclude that a ping is a search under art. 14, we "have no need to wade into these Fourth Amendment waters." Augustine, 467 Mass. at 244. Instead we "decide the issue based on our State Constitution, bearing in mind that art. 14 . . . does, or may, afford more substantive protection to individuals than that which prevails under the Constitution of the United States" (quotation and citation omitted). Commonwealth v. Mauricio, 477 Mass. 588, 594 (2017). In deciding this case under art. 14, we look to cases interpreting the Fourth Amendment only for historical context and more general guidance. See id. at 591-594 & n.1 (reviewing Fourth Amendment jurisprudence).

¹⁰ Other factors include whether the public had access to, or might be expected to be in, the area from which the surveillance was undertaken; the character of the area (or object) that was the subject of the surveillance; and whether the defendant has taken normal precautions to protect his or her privacy. See Commonwealth v. Berry, 420 Mass. 95, 106 n.9 (1995); Commonwealth v. One 1985 Ford Thunderbird Auto., 416 Mass. 603, 607 (1993). We have also noted that "[t]he inquiry is one highly dependent on the particular facts and circumstances of the case." One 1985 Ford Thunderbird Auto., supra.

¹¹ In her concurrence, Justice Lenk, joined Chief Justice Gants, takes issue with our consideration of the nature of the governmental conduct at issue, arguing that our decision is too narrowly focused and "appears preoccupied not with what the government learns when it conducts a ping, but with the way in which the government learns it." Post at . Yet the nature of the challenged governmental conduct -- i.e., what the government does -- has always been relevant to whether such conduct implicates reasonable expectations of privacy. See United States v. Maynard, 615 F.3d 544, 566 (D.C. Cir. 2010),

Auto., 416 Mass. 603, 607 (1993). This analysis is also "informed by historical understandings of what was deemed an unreasonable search and seizure when [the Constitutions were] adopted" (quotations omitted). Carpenter, 138 S. Ct. at 2214. See Jenkins v. Chief Justice of the Dist. Court Dep't, 416 Mass.

aff'd in part sub nom. United States v. Jones, 565 U.S. 400 (2012) (noting that "means used to uncover private information" plays role "in determining whether a police action frustrates a person's reasonable expectation of privacy"). Indeed, as the United States Court of Appeals for the District of Columbia has noted, police may "without a warrant record one's conversations by planting an undercover agent in one's midst but may not do the same by wiretapping one's phone. . . . [I]n the former case one's reasonable expectation of control over one's personal information would not be defeated; in the latter it would be" (citation omitted). Id. See Kyllo v. United States, 533 U.S. 27, 35 n.2 (2001). Accordingly, a determination on whether governmental conduct implicates reasonable privacy expectations requires us to analyze the nature of the governmental conduct at issue, not just the information that it reveals.

This is particularly true in the case of pinging a cell phone to reveal an individual's real-time location. Indeed, an individual does not have a reasonable expectation of privacy in his or her real-time location under every circumstance. An individual would certainly not have a reasonable expectation of privacy in his or her real-time location while standing on a public sidewalk, visible to any onlookers, including police, who would care to look in the individual's direction. See California v. Greenwood, 486 U.S. 35, 41 (1988) ("police cannot reasonably be expected to avert their eyes from . . . activity that could have been observed by any member of the public"); Katz v. United States, 389 U.S. 347, 351 (1967) ("What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection"); Commonwealth v. D'Onofrio, 396 Mass. 711, 717 (1986). What information police learn from the ping therefore cannot be the sole focus of the analysis. Rather, the nature of the intrusion -- in this case, the ping -- must also be analyzed to determine whether it implicates any reasonable expectations of privacy.

221, 229 (1993) ("we construe [art. 14] in light of the circumstances under which it was framed, the causes leading to its adoption, the imperfections hoped to be remedied, and the ends designed to be accomplished" [quotation and citation omitted]).

The intrusive nature of police action that causes an individual's cell phone to transmit its real-time location raises distinct privacy concerns. When the police ping a cell phone, as they did in this case, they compel it to emit a signal, and create a transmission identifying its real-time location information. Matter of an Application of the U.S.A. for an Order Authorizing Disclosure of Location Info. of a Specified Wireless Tel., 849 F. Supp. 2d 526, 534 (D. Md. 2011) (Matter of an Application) (describing that ping of cell phone "send[s] a signal directing the built-in satellite receiver in a particular [cell phone] to calculate its location and transmit the location data back to the service provider"). This action and transmission is initiated and effectively controlled by the police, and is done without any express or implied authorization or other involvement by the individual cell phone user. See id. (noting that cell phone ping is "undetectable to the [cell phone] user"). Without police direction, such data would also not otherwise be collected and retained by the service provider. See id. (noting that service providers "typically do not

maintain records of the GPS coordinates of [cell phones] operating on their network"). Accordingly, in pinging a cell phone, the police "actively induce[] [it] to divulge its identifying information" for their own investigatory purposes.¹² Jones v. United States, 168 A.3d 703, 713 (D.C. 2017).

We confidently conclude that such police action implicates reasonable expectations of privacy.¹³ Indeed, society reasonably expects that the police will not be able to secretly manipulate

¹² We note that today, virtually all cell phones contain a GPS receiver, thereby giving police the capability to ping the cell phones of hundreds of millions of people. See Carpenter v. United States, 138 S. Ct. 2206, 2211 (2018) (noting that "[t]here are 396 million cell phone service accounts in the United States"). Beyond the benefits that the inclusion of a GPS receiver offers to the user, such as allowing the user to use mapping applications, it also enables service providers to comply with Federal regulations requiring them to transmit the real-time location of any cell phone that dials 911 to "facilitate rescue and emergency assistance." 47 C.F.R. § 20.18(e) (2018) (requiring service providers to "provide to the [police] . . . the location of all 911 calls by longitude and latitude"); United States v. Wallace, 885 F.3d 315, 315 & n.1 (5th Cir. 2018) (per curiam).

¹³ We recognize that the government's ability to compel a cell phone to reveal its location is not limited to the pinging that occurred in this case. For instance, law enforcement in other jurisdictions have used "cell site simulators" to track down persons of interest by "trick[ing] all nearby phones" into revealing their location information (quotations omitted). State v. Andrews, 227 Md. App. 350, 379 (2016). Nor do we doubt that as technology continues to advance, the government will develop new ways to compel an individual's cell phone to reveal its location. The privacy concerns raised by pinging a cell phone apply equally to any circumstance where the cell phone's location information is generated as a direct result of the government's manipulation of an individual's cell phone.

our personal cell phones for any purpose, let alone for the purpose of transmitting our personal location data.¹⁴ Cf. Connolly, 454 Mass. at 835 (Gants, J., concurring) (describing privacy concerns under art. 14 where police installed GPS tracking device on vehicle without defendant's knowledge); State v. Andrews, 227 Md. App. 350, 392 (2016) ("no one expects that their [cell] phone information is being sent directly to the police department" [citation omitted]); State v. Earls, 214 N.J. 564, 587 (2013) ("no one buys a cell phone to share detailed information . . . with the police"). A person obtains a cell phone for a variety of reasons, including for "the purpose of making and receiving telephone calls," to communicate with others electronically, or perhaps to conduct business. See Augustine, 467 Mass. at 264 (Gants, J., dissenting). See also Riley v. California, 573 U.S. 373, 394-395 (2014) (describing cell phone use); Earls, supra at 587-588. More particularly,

¹⁴ Justice Lenk's concurrence, in which Chief Justice Gants joins, argues that our consideration of the fact that a ping involves government manipulation of a cell phone places undue weight on "property rights" and therefore "risks conflating our doctrines of search and seizure." Post at . The concurrence goes on to state that "[o]ther courts that have confronted this issue have done so by focusing on an individual's reasonable expectation of privacy in his or her real-time location" and that it would focus on the same. Id. at . Contrary to the concurrence's assertions, we do not conclude that the manipulation violates art. 14 because it is a seizure or because it interferes with an individual's property right. We quite clearly conclude that such manipulation violates art. 14 because it intrudes on reasonable expectations of privacy.

individuals obtain cell phones because carrying one has become "indispensable to participation in modern society." Carpenter, 138 S. Ct. at 2220. The decision to obtain a cell phone, however, does not in any way authorize police to independently, and without judicial oversight, invade or manipulate the device to compel it to reveal information about its user. Nor does it operate to reduce one's expectation of privacy against such action.

Manipulating our phones for the purpose of identifying and tracking our personal location presents an even greater intrusion. In today's digital age, the real-time location of an individual's cell phone is a proxy for the real-time location of the individual. Indeed, cell phones are "an indispensable part of" daily life and exist as "almost permanent attachments to [their users'] bodies" (citation omitted). Augustine, 467 Mass. at 245-246. Cell phones "physically accompany their users everywhere" such that tracking a cell phone results in "near perfect surveillance" of its user. Carpenter, 138 S. Ct. at 2218. Augustine, supra at 246. The Commonwealth's ability to identify a cell phone's real-time location is therefore, in essence, the ability to identify the real-time location of its user.

The fact that cell phones are now "almost a feature of human anatomy" effectively means that individuals are

constantly, and often unknowingly, carrying a hidden tracking device that can be activated by law enforcement at any moment, subject only to the constraints of whether law enforcement knows the phone number and whether the cell phone is turned on (quotation and citation omitted). Carpenter, 138 S. Ct. at 2218. See Matter of an Application, 849 F. Supp. 2d at 540 ("Location data from a cell phone . . . enables law enforcement to locate a person entirely divorced from all visual observation. Indeed, this is ostensibly the very characteristic that makes obtaining location data a desirable method of locating the subject . . ."). This extraordinarily powerful surveillance tool finds no analog in the traditional surveillance methods of law enforcement and therefore grants police unfettered access "to a category of information otherwise unknowable." Carpenter, supra. Indeed, prior to the advent of cell phones, law enforcement officials were generally required, by necessity, to patrol streets, stake out homes, interview individuals, or knock on doors to locate persons of interest. See United States v. Jones, 565 U.S. 400, 429 (2012) (Alito, J., concurring) (recognizing that, "[i]n the pre-computer age," law enforcement surveillance tools were limited and thus "the greatest protections of privacy were neither constitutional nor statutory, but practical"); id. 415-416 (Sotomayor, J., concurring) ("because GPS monitoring is cheap . . . and . . .

proceeds surreptitiously, it evades the ordinary checks that constrain abusive law enforcement practices: limited police resources and community hostility" [quotation and citation omitted]). For this reason, society's expectation has been that law enforcement could not secretly and instantly identify a person's real-time physical location at will. See id. at 429 (Alito, J., concurring) (discussing societal expectations with respect to GPS tracking); Connolly, 454 Mass. at 835 (Gants, J., concurring) (noting that "[i]n the context of GPS," individuals reasonably expect that they will not be "contemporaneously monitored except through physical surveillance"); Jones, 168 A.3d at 712-713 (noting that society does not reasonably expect police to be able to instantly locate individuals).

Allowing law enforcement to immediately locate an individual whose whereabouts were previously unknown by compelling that individual's cell phone to reveal its location contravenes that expectation. See Jones, 168 A.3d at 714-715 (noting law enforcement's "powerful person-locating capability that private actors do not have" invades reasonable expectations of privacy); Earls, 214 N.J. at 586 ("Using a cell phone to determine the location of its owner . . . involves a degree of intrusion that a reasonable person would not anticipate"). Although our society may have reasonably come to expect that the voluntary use of cell phones -- such as when making a phone call

-- discloses cell phones' location information to service providers, see Augustine, 467 Mass. at 263 (Gants, J., dissenting), and that records of such calls may be maintained, our society would certainly not expect that the police could, or would, transform a cell phone into a real-time tracking device without judicial oversight. Cf. Commonwealth v. Rousseau, 465 Mass. 372, 382 (2013) ("a person may reasonably expect not to be subjected to extended GPS electronic surveillance by the government"); Andrews, 227 Md. App. at 394-395 ("cell phone users have an objectively reasonable expectation that their cell phones will not be used as real-time tracking devices through the direct and active interference of law enforcement"); Earls, supra at 586. The power of such unauthorized surveillance is far "too permeating" and too susceptible to being exercised arbitrarily by law enforcement -- precisely the type of governmental conduct against which the framers sought to guard. See Commonwealth v. Blood, 400 Mass. 61, 71 (1987) (noting that art. 14 was adopted to protect against "search policies . . . which allowed officers of the crown to search, at their will, wherever they suspected [evidence of criminal activity] to be" [emphasis in original; citation omitted]). See also Carpenter, 138 S. Ct. at 2214 ("The basic purpose of [the Fourth] Amendment . . . is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials"

[quotations and citation omitted]). It would also require a cell phone user "to turn off the cell phone just to assure privacy from governmental intrusion." Tracey v. State, 152 So. 3d 504, 523 (Fla. 2014).

To allow such conduct without judicial oversight would undoubtedly "shrink the realm of guaranteed privacy" under art. 14 and leave legitimate privacy rights at the "mercy of advancing technology." See Kyllo, 533 U.S. at 34, 35. Accordingly, we conclude that by causing the defendant's cell phone to reveal its real-time location, the Commonwealth intruded on the defendant's reasonable expectation of privacy in the real-time location of his cell phone.¹⁵ The Commonwealth

¹⁵ Justice Lenk's concurrence argues that our decision today somehow amounts to a mandate that going forward, a search only occurs if it involves "governmental manipulation of an individual's property." Post at . We fail to see how the concurrence could read our decision to make such a pronouncement. Nothing in our decision suggests that a search only occurs when the government manipulates one's property. We only conclude that the manipulation that occurs in these circumstances invades reasonable expectations of privacy. That one method of police conduct amounts to a search does not mean any other method is fair game. Indeed, as the concurrence correctly points out, "[n]umerous searches involve no government manipulation of a person's property." Post at . Our decision today does not strip constitutional protections in those cases. As always, governmental conduct that invades reasonable expectations of privacy is ordinarily not permitted without a warrant, regardless of how such an invasion takes place.

Additionally, the concurrence argues that our decision risks "creating the impression that an exception exists for searches of real-time locations that providers collect

therefore conducted a search in the constitutional sense under art. 14.¹⁶

automatically," such as registration CSLI, which is recorded by a service provider every few seconds. Post at . This is incorrect, as we plainly stated in Augustine, 467 Mass. at 255, and again in Commonwealth v. Estabrook, 472 Mass. 852, 858 n.12 (2015), that the Commonwealth ordinarily may not access registration CSLI without a warrant.

¹⁶ We also note that the state of technology at the time the ping occurred in this case -- 2012 -- enabled law enforcement to pinpoint the cell phone to the "general location" of the street in question in Brockton. Had the same coordinates been entered into a computer mapping program as the technology exists today, it appears that police would have been able to pinpoint the cell phone's location to directly inside of the defendant's former girlfriend's home. Had this capability existed at the time the ping occurred in this case, there is no doubt that it would have constituted a search in the constitutional sense, as it would have identified the defendant's presence inside of a home. Cf. United States v. Karo, 468 U.S. 705, 707, 715 (1984) (search occurred when government elicited transmission from electronic tracking device that was brought into private residence because device "reveal[ed] a critical fact about the interior of the premises that the Government [was] extremely interested in knowing and that it could not have otherwise obtained without a warrant"). See Kyllo, 533 U.S. at 38; Augustine, 467 Mass. at 252.

The concurrence by Justice Lenk faults us for not adopting the alternative reasoning that the ping in this case must have been a search because even though it only revealed to police "the name of the street [on which the cell phone was located], that information came from the [cell phone] within the home." Post at . Although it is true that a search occurs when governmental conduct reveals "any information regarding the interior of the home that could not otherwise have been obtained without physical intrusion into a constitutionally protected area" (quotation and citation omitted), Kyllo, 533 U.S. at 34, it follows that if the governmental conduct does not actually reveal anything about the interior of a home, it is not a search. Indeed, where, as here, a cell phone ping does not reveal the phone to be directly inside of a home, it cannot be

The Commonwealth nonetheless contends that under our decision in Commonwealth v. Estabrook, 472 Mass. 852, 858 & n.12 (2015), where we held that police may obtain up to six hours of historical "telephone call" cell site location information (CSLI) without obtaining a warrant (six-hour rule), the single ping of the defendant's cell phone was "too brief to implicate [a] person's reasonable privacy interest" and thus does not constitute a search in the constitutional sense (citation omitted). This argument, however, ignores both the clear language of Estabrook and the fundamental differences between accessing historical "telephone call" CSLI and police action that causes a cell phone to identify its real-time location.

As we stated in Estabrook, 472 Mass. at 858 n.12, albeit without elaboration, the six-hour rule applies only to historical "telephone call" CSLI. Historical "telephone call" CSLI is collected and stored by the service provider in the ordinary course of business when the cell phone user voluntarily makes or receives a telephone call. In this context, the six-hour rule is consistent with reasonable societal expectations of privacy. In contrast, there is nothing voluntary or expected about police pinging a cell phone, and the six-hour rule therefore does not apply.

said that the ping revealed a "critical fact about the interior of the premises." Karo, 468 U.S. at 715.

2. Reasonableness of search. Our conclusion that the Commonwealth committed a search in this case does not, however, decide the ultimate question of the search's constitutionality. Indeed, art. 14 prohibits only unreasonable searches. See id. ("Every subject has a right to be secure from all unreasonable searches" [emphasis added]).

Where police conduct a search without a warrant, the search is presumptively unreasonable. Commonwealth v. White, 475 Mass. 583, 588 (2016). Because the "ultimate touchstone" of art. 14 is reasonableness, however, "the warrant requirement is subject to certain carefully delineated exceptions." Commonwealth v. Entwistle, 463 Mass. 205, 213 (2012), cert. denied, 568 U.S. 1129 (2013). One such exception is where police can establish probable cause and exigent circumstances. Commonwealth v. Alexis, 481 Mass. 91, 96, 97 (2018). "Under the exigent circumstances exception to the warrant requirement, 'there must be a showing that it was impracticable for the police to obtain a warrant, and the standards as to exigency are strict.'" Id. at 97, quoting Commonwealth v. Forde, 367 Mass. 798, 800 (1975). The Commonwealth bears the burden to demonstrate both probable cause and exigent circumstances. Commonwealth v. Molina, 439 Mass. 206, 209 (2003).

The defendant does not contest that there was probable cause to believe that he had committed the crime.¹⁷ Our analysis is therefore limited to whether police were confronted with an exigency such that it was impracticable for them to obtain a warrant.

We evaluate "whether an exigency existed, and whether the response of the police was reasonable and therefore lawful . . . in relation to the scene as it could appear to the officers at the time, not as it may seem to a scholar after the event with the benefit of leisured retrospective analysis." Commonwealth v. Young, 382 Mass. 448, 456 (1981). Accordingly, we do not examine facts in isolation; rather, we take into account the totality of the circumstances. See Forde, 367 Mass. at 801. Although a number of factors have been considered in evaluating the existence of exigent circumstances and the reasonableness of police response,¹⁸ we have tended to focus on three factors.

¹⁷ Among other things, the defendant had been identified by multiple witnesses as the shooter, and his photograph was positively identified in several photographic arrays. The Commonwealth has therefore met its burden of establishing probable cause.

¹⁸ These include, inter alia, (1) "a showing that the crime was one of violence or that the suspect was armed"; (2) "a clear demonstration of probable cause"; (3) "strong reason to believe the suspect was in the dwelling"; (4) "a likelihood that the suspect would escape if not apprehended"; and (5) "whether the entry is peaceable and whether the entry is in the nighttime." Commonwealth v. Forde, 367 Mass. 798, 807 (1975).

Commonwealth v. Figueroa, 468 Mass. 204, 213 (2014). See Commonwealth v. Tyree, 455 Mass. 676, 687, 687 n.24 (2010). Specifically, we consider whether police had "reasonable grounds to believe that obtaining a warrant would be impracticable under the circumstances because the delay in doing so would pose a significant risk that [(1)] the suspect may flee, [(2)] evidence may be destroyed, or [(3)] the safety of the police or others may be endangered." Figueroa, supra. Although each of these risks need not be present for there to be exigent circumstances, each was present here.¹⁹ See id.

As to the risk of flight in this case, there were reasonable grounds to believe that the defendant would have been aware that police would be looking for him. He had shot the victim in the daytime in the presence of others, and thus he likely knew that his crime was likely to attract the attention of authorities. He was also undoubtedly aware that there were at least two witnesses who could identify him: the second person in the defendant's vehicle and the second passenger in the victim's vehicle. Cf. Figueroa, 468 Mass. at 213-214 (risk

¹⁹ As Justice Lenk correctly points out, the fact that the suspect shot the victim with a shotgun did not, by itself, create an exigency. Post at . See Commonwealth v. Figueroa, 468 Mass. 204, 213 (2014), quoting Commonwealth v. Tyree, 455 Mass. 676, 684 (2010) (rejecting proposition that "exigent circumstances always justify a warrantless entry and search in the aftermath of a crime involving a firearm").

of flight present where murder suspect shot victim without wearing mask and subsequently could attempt to evade police). Contrast Alexis, 481 Mass. at 100-101 (no exigent circumstances where "crime occurred the previous day, and there was no evidence that the defendant even knew or had reason to know that he was a suspect before the police arrived at his home"); Tyree, 455 Mass. at 687, 687 n.24 (2010) (no risk of flight where defendant committed robbery while masked, at night, and no witnesses would recognize him). The suspect was already on the run after fleeing the scene, and there was a risk that, with the passage of time, he would take further precautions to effectuate his escape if police did not locate him.

As to the risk of destruction of evidence, the record reflects that police learned that the defendant still possessed the sawed-off shotgun at the time he fled the scene of the shooting. Because a sawed-off shotgun is per se illegal, it requires ongoing concealment from authorities. See G. L. c. 269, § 10 (c). This fact, when coupled with the fact that the suspect likely knew he could be identified and would have reason to fear capture, gave police reasonable grounds to believe that there was a risk that the suspect would attempt to conceal or destroy the shotgun before he was located by police. Cf. Figueroa, 468 Mass. at 214 (likelihood of being recognized by eyewitness created risk that suspect would eliminate forensic

evidence). Contrast Commonwealth v. Huffman, 385 Mass. 122, 126 (1982) (no risk of destruction of evidence where marijuana packagers had no reason to believe police were investigating them).

Finally, police also had reasonable grounds to believe that the defendant posed an immediate risk to the safety of police and others. The suspect possessed a sawed-off shotgun, a dangerous and per se illegal weapon. See G. L. c. 269, § 10 (c). In contrast to a handgun or a knife, a sawed-off shotgun presents an ongoing danger; such a weapon has no lawful function, and its owner continues to demonstrate a willingness to violate the law by possessing it. In these circumstances, police had reasonable grounds to believe that the suspect not only had shot and killed once with the shotgun, but that he had brutally murdered a person without an apparent motive. This was not a case in which the threat posed by the suspect was limited to a particular victim, for a particular purpose, such that the circumstances that had led to the shooting dissipated thereafter. Contrast Tyree, 455 Mass. at 678, 689 & n.28 (no ongoing danger where robbery was complete and suspect was not "on the run"). Rather, the officers had reasonable grounds to believe that if the suspect shot one person, when unprovoked and seemingly undeterred by fear of discovery or reprisal, other individuals were in danger as well. See Figueroa, 468 Mass. at

214 (fear that "hot-headed gunman" who still possessed weapon could take nearby children as hostages); Commonwealth v. Donoghue, 23 Mass. App. Ct. 103, 108 (1986), cert. denied, 481 U.S. 1022 (1987) ("unusually brutal" nature of assault suggested suspect was dangerous and that there might be other victims). Indeed, law enforcement officials' concern about the danger posed by the shotgun was reflected in the "Exigent Circumstance Requests" form sent by facsimile to the service provider, which stated that there was an "[o]utstanding murder suspect, shot and killed victim with shotgun. Suspect still has shotgun."

With these considerations in mind, we conclude that under the circumstances at the time the defendant's cell phone was pinged, the police had reasonable grounds to believe that obtaining a warrant would be impracticable because taking the time to do so would have posed a significant risk that the suspect may flee, evidence may be destroyed, or the safety of the police or others may be endangered. Cf. Figueroa, 468 Mass. at 213-214. See Carpenter, 138 S. Ct. at 2223 (noting that certain "exigencies" may permit police to access cell phone location information without warrant, such as need to "pursue a fleeing suspect, protect individuals from imminent harm, or prevent the imminent destruction of evidence").

Faced with this exigency, the police acted entirely reasonably in pingging the defendant's cell phone to determine its location.²⁰ Accordingly, the motion judge erred in concluding that the warrantless ping of the defendant's cell phone was not justified by exigent circumstances and the allowance of the defendant's motion to suppress must therefore be reversed.

So ordered.

²⁰ The reasonableness of police conduct in response to the exigency in this case is also supported by the manner in which the search was conducted. Forde, 367 Mass. at 807 (noting that whether physical entry into home by police is reasonable is informed by whether entry is made peaceably and during daytime). The ping revealed only the location information of the defendant's cell phone at a specific time, and did not otherwise excessively intrude on the defendant's privacy interests in the way other types of searches would, such as a forced physical entry of a dwelling. See id. Cf. Caraballo, 831 F.3d at 106 (ping of defendant's cell phone justified by exigent circumstances based, in part, on fact that "pinging was 'strictly circumscribed' to finding [the defendant] as quickly as possible. . . . [T]he officers' use of this information was no more expansive than necessary to address the exigency that they perceived existed"). See Carpenter, 138 S. Ct. at 2223 (noting that accessing cell phone location information without warrant reasonable under Fourth Amendment where police are confronted with "exigencies" such as need to "pursue a fleeing suspect, protect individuals who are threatened with imminent harm, or prevent imminent destruction of evidence").

LENK, J. (concurring, with whom Gants, C.J., joins). I agree with the court that the "pinging" of a cellular telephone, even once, constitutes a search under art. 14 of the Massachusetts Declaration of Rights that ordinarily requires a warrant. I also agree with the court that, in the exigent circumstances here, a warrant was not required. Although I quarrel with certain aspects of the court's exigency analysis, I write separately chiefly because I take issue with the weight my colleagues implicitly place on property rights in concluding that a warrantless ping is unconstitutional.

A search does not require governmental manipulation of an individual's property. Concluding so would carve out a gaping exception for violations of an individual's privacy that do not rest on government interference with an individual's property. Federal law, and this court's more recent jurisprudence, have moved beyond a focus on the nature of the government's physical intrusion in determining whether a search has occurred. It is rather the right to be let alone, including and especially within the home, that mandates that the government obtain a search warrant, supported by probable cause, before it may locate a person through a ping of a cellular telephone.

1. The right to be let alone. "Article 14, like the Fourth Amendment, was intended by its drafters not merely to protect the citizen against the breaking of his [or her] doors,

and the rummaging of his [or her] drawers," but to confer, "as against the government, the right to be let alone -- the most comprehensive of rights and the right most valued by civilized [people]" (quotation and citations omitted). Commonwealth v. Blood, 400 Mass. 61, 69 (1987). The right to be let alone promotes a "sense of security" in a free society "essential to liberty of thought, speech, and association." See id. at 73. By codifying this right in art. 14 and, later, the Fourth Amendment to the United States Constitution, our ancestors sought to "secure the privacies of life against arbitrary power," and "place obstacles in the way of a too permeating police surveillance" (quotations and citations omitted). Carpenter v. United States, 138 S. Ct. 2206, 2214 (2018). "[T]he relevant question is not whether criminals must bear the risk of warrantless surveillance, but whether it should be imposed on all members of society" (citation omitted). Blood, supra.

The analysis regarding "which expectations of privacy are entitled to protection" is grounded in a historical understanding "of what was deemed an unreasonable search . . . when [the Constitution] was adopted" (citation omitted). Carpenter, 138 S. Ct. at 2213-2214. Our task is to "assure [the] preservation of that degree of privacy against government that existed when the Fourth Amendment [and art. 14 were]

adopted." Id. at 2214, quoting Kyllo v. United States, 533 U.S. 27, 34 (2001). To do so, I would focus on the reasonable expectation of privacy that individuals maintain in their real-time location.

Individuals maintain a strong privacy interest in their location information, which implicates their private spheres. See Carpenter, 138 S. Ct. at 2217 (time-stamped location information from individual's cellular telephone "provides an intimate window into a person's life"). See also Riley v. California, 573 U.S. 373, 403 (2014) (location records and other information on cellular telephones "hold for many Americans the privacies of life" [quotation and citation omitted]). We thus have recognized the need to protect individuals' reasonable expectations of privacy in their location information:

"[T]he government's contemporaneous electronic monitoring of one's comings and goings in public places invades one's reasonable expectation of privacy. We conclude that under art. 14, a person may reasonably expect not to be subjected to extended [global positioning system (GPS)] electronic surveillance by the government, targeted at his movements, without judicial oversight and a showing of probable cause."

Commonwealth v. Rousseau, 465 Mass. 372, 382 (2013).

This interest is not diminished but, rather, heightened by the fact that most people carry cellular telephones with them at practically all times. See Riley, 573 U.S. 395 ("it is the person who is not carrying a [cellular telephone] . . . who is

the exception. According to one poll, nearly three-quarters of smart phone users report being within five feet of their phones most of the time . . ."). See also United States v. Ellis, 270 F. Supp. 3d 1134, 1145 (N.D. Cal. 2017) (cellular telephones act as close proxy to one's actual physical location). "We cannot accept the proposition that [cellular telephone] users volunteer to convey their location information simply by choosing to activate and use their [cellular telephones] and to carry the devices on their person." United States v. Graham, 796 F.3d 332, 355 (4th Cir. 2015), rehearing en banc, 824 F.3d 421 (4th Cir. 2016), cert. denied, 138 S. Ct. 2700 (2018).

The ability of the government to know where anyone is at any moment poses a profound threat to the right to be let alone. A real-time ping permits police not merely to observe an individual's movements after the fact but to confront an individual wherever he or she may be.¹ When police act on real-time information by arriving at a person's location, they signal to both the individual and his or her associates that the person

¹ Locations reported by cellular telephones have become increasingly accurate. Cellular service providers "already have the capability to pinpoint a phone's location within [fifty] meters." Carpenter v. United States, 138 S. Ct. 2206, 2219 (2018). Depending upon the technology involved, the level of precision is sometimes so exact as to identify "individual floors and rooms within buildings" (citation omitted). See In re Application of the U.S.A. for Historical Cell Site Data, 724 F.3d 600, 629 (5th Cir. 2013).

is being watched. "Awareness that the Government may be watching chills associational and expressive freedoms." See United States v. Jones, 565 U.S. 400, 416 (2012) (Sotomayor, J., concurring). To know that the government can find you, anywhere, at any time is -- in a word -- "creepy." United States v. Pineda-Moreno, 617 F.3d 1120, 1126 (9th Cir. 2010) (Kozinski, J., dissenting), judgment vacated, 565 U.S. 1189 (2012). "It is a power that places the liberty of every [person] in the hands of every petty officer" (citation omitted), Blood, 400 Mass. at 71, and risks "alter[ing] the relationship between citizen and government in a way that is inimical to democratic society" (citation omitted), Jones, supra at 415-417.

Other courts that have confronted this issue have done so by focusing on an individual's reasonable expectation of privacy in his or her real-time location. See, e.g., Matter of an Application of the U.S.A. for an Order Authorizing Disclosure of Location Info. of a Specified Wireless Tel., 849 F. Supp. 2d 526, 583 (D. Md. 2011) (Matter of an Application) ("real time, precise location data generated by a [cellular telephone] is entitled to a reasonable expectation of privacy and thus is subject to the Fourth Amendment's protections"); State v. Andrews, 227 Md. App. 350, 400 (2016) (defendant had reasonable expectation of privacy in real-time cellular telephone location

information).² This court, by contrast, puts undue emphasis on government "manipulation." Ante at note 13.

2. Search analysis. The court's reasoning risks conflating our doctrines of search and seizure. Although art. 14 and the Fourth Amendment guard against both, a search and a seizure are distinct legal concepts. See Commonwealth v. Connolly, 454 Mass. 808, 819 (2009). Under both the Federal and Massachusetts Constitutions, the government conducts a search when it "intrudes on a person's reasonable expectation of privacy." Commonwealth v. Augustine, 467 Mass. 230, 241 (2014), S.C., 470 Mass. 837 (2015), citing Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). See Carpenter, 138 S. Ct. at 2219. The government conducts a seizure when it interferes with an individual's property rights. See Connolly, supra at 819, 823. See also United States v. Karo, 468 U.S. 705, 712 (1984). "The distinction is not merely academic." See Connolly, supra at 833 (Gants, J., concurring) (noting that attachment of GPS device to vehicle constituted search due to

² The highest court in Maryland has yet to reach the issue of privacy in real-time location information. When it had the chance to comment on the reasoning in State v. Andrews, 227 Md. App. 350, 393 (2016), the court observed that "there may be a decision in the near future [(Carpenter)] providing authoritative guidance. . . . None of this means that the analysis in Andrews is wrong." See State v. Copes, 454 Md. 581, 617 (2017).

police's interference with owner's reasonable expectation of privacy, and not seizure).

The court appears preoccupied not with what the government learns when it conducts a ping, but with the way in which the government learns it.³ In determining that the ping in this case constituted a search, the court puts substantial emphasis on the

³ The manner in which the government conducts a search of course matters; there is a marked difference between knocking on doors and knocking down doors. By fixating on the method, however, the court loses sight of the very thing in which individuals hold an expectation of privacy: their location.

The court's own examples are instructive. As noted in United States v. Maynard, 615 F.3d 544, 566 (D.C. Cir. 2010), aff'd in part sub nom. United States v. Jones, 565 U.S. 400 (2012), upon which the court relies, the reason a wiretap implicates the Fourth Amendment, while an undercover agent might not, is premised on "the individual's control of information concerning his or her person" (citation omitted). When an individual knowingly is in the presence of another, he or she has a reduced expectation of control over the secrecy of his or her words. Similarly, taking the court's example of an individual "standing on a public sidewalk," see ante at note 11, we look, again, to the expectation of the individual with respect to the information in question, in that case, his or her location. The question is not whether the individual expects the police to use one method or another, but rather whether the individual can expect his or her location to remain private if he or she so chooses.

It is because of the right to be let alone that the real-time identification of an individual's location implicates art. 14. After all, a ping is "only one way to gather data in real time regarding the whereabouts of an individual." See Commonwealth v. Connolly, 454 Mass. 808, 835 (2009) (Gants, J., concurring) (discussing police use of globing positioning system [GPS] tracking devices). Put differently, art. 14 protects us from pings not because of the right to keep the government from interfering with our cellular telephones, but because of the right to keep the government from finding us.

fact that the government "secretly manipulate[d]" the defendant's cellular telephone by "initiat[ing] and effectively control[ing]" its transmission of a signal. See ante at . Article 14 is implicated, the court notes, wherever "the [cellular telephone]'s location information is generated as a direct result of the government's manipulation of an individual's [cellular telephone]." See ante at note 13. This analysis, however, is more apposite to discussions of unreasonable seizure. Whether the ping constituted a search turns not on government manipulation but, rather, on reasonable expectations of privacy.

a. Seizure. In Connolly, 454 Mass. at 822-823, we confronted for the first time the issue of GPS monitoring by police. There, police had installed a GPS tracking device on a defendant's vehicle. Id. at 811. By manipulating the defendant's property (the battery in his vehicle), the government was able to monitor his location. Id. at 812.

We determined that the installation of the GPS tracking device constituted a seizure, because it required "entry by the police" into the defendant's vehicle and "operation of the vehicle's electrical system." Connolly, 454 Mass. at 822. We further determined that police monitoring of the device, "[i]n addition, and apart from the installation of the GPS device," independently constituted a second seizure:

"[T]he government's control and use of the defendant's vehicle to track its movements interferes with the defendant's interest in the vehicle notwithstanding that he maintains possession of it. The owner of property has a right to exclude it from 'all the world,' and the police use 'infringes that exclusionary right.' The interference occurs regardless whether the device draws power from the vehicle and regardless whether the data is transmitted to a monitoring computer. It is a seizure not by virtue of the technology employed, but because the police use private property (the vehicle) to obtain information for their own purposes." (Citations omitted).

Id. at 823.

Accordingly, where police "manipulate" private property (here, a cellular telephone), causing it to transmit information "for their own purposes," a seizure has occurred. Without using the vocabulary of "seizure" or "property," the court nonetheless performs an analysis steeped in both. In this case, however, the defendant did not challenge the ping of his cellular telephone as a seizure. The issue properly before us is only whether the ping constituted a search.

b. Search. Whether a search took place is a question of privacy rights, not property rights. See Connolly, 454 Mass. at 833 (Gants, J., concurring) ("In fact, the appropriate constitutional concern is not the protection of property but rather the protection of the reasonable expectation of privacy").

The court cites Commonwealth v. One 1985 Ford Thunderbird Auto., 416 Mass. 603, 607 (1993), to justify its evaluation of

the "nature of the intrusion" to determine whether the government violated a reasonable expectation of privacy. In its subsequent jurisprudence, however, this court, like the Federal courts, has moved beyond this narrow approach. See Augustine, 467 Mass. at 246 (focusing on defendant's reasonable expectation of privacy in cell site location information [CSLI] itself); Commonwealth v. Williams, 453 Mass. 203, 208 (2009) (focusing on factors not involving government's intrusion⁴ to determine whether defendant had reasonable expectation of privacy). See also Kyllo, 533 U.S. at 34 (declining to examine nature of intrusion in determining whether search had occurred). Our evaluation of an individual's reasonable expectation of privacy takes place "even in the absence of a property interest." See Rousseau, 465 Mass. at 382 ("our property-based analysis in Connolly" does not represent "the outer limits of the protections afforded by art. 14").

Numerous searches involve no government manipulation of a person's property. Individuals maintain a reasonable expectation of privacy, for example, where police wiretap a

⁴ The court in that case focused on several factors, including "the character of the location involved; whether the defendant owned or had other property rights in the area at issue; whether the defendant controlled access to the area; and whether the area was freely accessible to others" to determine whether the defendant's expectation of privacy was reasonable. Commonwealth v. Williams, 453 Mass. 203, 208 (2009).

public telephone booth, see Katz, 389 U.S. at 348, 351; monitor a GPS "beeper" in a private residence, see Karo, 468 U.S. at 707, 715; or penetrate the walls of a home with thermal sensors, see Kyllo, 533 U.S. at 29-30, 34, all without manipulating an individual's property.

We have not required the manipulation of a cellular telephone in order to conclude that reasonable expectations of privacy in its historical location data are implicated. See Augustine, 467 Mass. at 250 (police obtained historical CSLI from cellular service provider, without manipulating device). See also Carpenter, 138 S. Ct. at 2217. A search occurs, for purposes of art. 14, whenever the police obtain an individual's real-time location via his or her cellular telephone, regardless of whether they do so by "manipulating" the device.

By focusing on government manipulation in the search analysis, even without using the word "seizure," the court risks confusing the issue, creating the impression that an exception exists for searches of real-time locations that providers collect automatically. If government manipulation were required in order to render a ping subject to art. 14 scrutiny, then police could side-step the constitutional protection by requesting not a ping, but, rather, the cellular service provider's own automatically generated record of a cellular

telephone's current location.⁵ Such an attempt might avoid manipulating the cellular telephone, but it leaves individuals vulnerable to police surveillance of their real-time (up to several seconds old), automatically collected location data. See Commonwealth v. Estabrook, 472 Mass. 852, 858 n.12 (2015) (no exception for historical registration CSLI); Augustine, 467 Mass. at 255 (reasonable expectation of privacy in historical CSLI). It is in obtaining an individual's real-time location information that the government interferes with his or her reasonable expectation of privacy -- and thereby conducts a search. Such a search, however accomplished, exceeds the level of intrusion which society is willing to accept from its government.

3. Sanctity of the home. The court departs from the approach of other States to have confronted this issue in its

⁵ Cellular service providers automatically record the location of cellular telephones at regular intervals, absent any police request, in order to provide service. See Commonwealth v. Augustine, 467 Mass. 230, 238 n.18 (2014), S.C., 470 Mass. 837 (2015). This is called registration CSLI.

Practically speaking, the distinction between a "ping" and "registration CSLI" is often invisible to the requestor. If a requested ping fails, cellular service providers will "fall back" on the most recent location data, generally created within the preceding ten seconds, and provide that to law enforcement instead. See Matter of Wireless E911 Location Accuracy Requirements, 29 FCC Rcd. 2374, 2434 (2014). The record is silent as to whether the location data provided to police in this case was produced through a successful ping or a resort to registration CSLI instead.

silence concerning the risks of intruding upon private spaces, including the home. See, e.g., Tracey v. State, 152 So. 3d 504, 524-526 (Fla. 2014) (applying Fourth Amendment analysis); State v. Earls, 214 N.J. 564, 568-569 (2013) (applying State constitution). See also Andrews, 227 Md. App. at 393 (applying Fourth Amendment). I would rely, in part, on this reasoning, because it underscores significant risks inherent in the government ping-pong of cellular telephones.

In evaluating reasonable expectations of privacy in new contexts, we have long looked to whether an intrusion implicates a constitutionally protected area, such as the home.⁶ See Kyllo, 533 U.S. at 29-30, 34 (reasonable expectation of privacy where police used thermal imaging to detect heat through walls of house); Karo, 468 U.S. at 714-715 (GPS monitoring within home presumptively unreasonable); Augustine, 467 Mass. at 252-253 (recognizing that fundamental privacy interest attached to person's home complicates Fourth Amendment and art. 14 analysis). "[T]he sanctity of the home is of central concern in

⁶ An intrusion into the home, alone, is sufficient to implicate art. 14. See Commonwealth v. Porter P., 456 Mass. 254, 260 (2010) ("These factors may provide guidance when the place searched is not the defendant's home. . . . However, where, as here, the place searched is the interior of the . . . home, we need not consult any such factors in deciding that the [defendant] has a reasonable expectation of privacy, because the Fourth Amendment and art. 14 expressly provide that every person has the right to be secure against unreasonable searches and seizures in his home").

jurisprudence concerning the Fourth Amendment . . . and art. 14" Commonwealth v. Tatum, 466 Mass. 45, 56, cert. denied, 571 U.S. 1113 (2013).

Under the Fourth Amendment and art. 14, "all details [in the home] are intimate details, because the entire area is held safe from prying government eyes" (emphasis in original). Augustine, 467 Mass. at 252, quoting Commonwealth v. Porter P., 456 Mass. 254, 260 (2010). Any intrusion into the home, "by even a fraction of an inch," is presumptively unreasonable (citation omitted). See Kyllo, 533 U.S. at 37. Where technology permits police to learn "any information regarding the interior of a home that could not otherwise have been obtained" without entering the home, constitutional protections are triggered. See id. at 34. See also Karo, 468 U.S. at 716 (ability to detect "a particular article -- or a person, for that matter . . . that has been withdrawn from public view would present far too serious a threat to privacy interests in the home to escape entirely some sort of [constitutional] oversight").

Where some details of the home may appear more intimate than others -- compare, for example, boiling an egg with walking around in a state of undress -- the United States Supreme Court has declined to "develop a jurisprudence specifying which home activities are 'intimate' and which are not." Kyllo, 533 U.S.

at 38-39. For example, in Kyllo, supra at 38, the government was not permitted to learn "how warm -- or even how relatively warm -- [a defendant] was heating his residence." As the Court stated:

"The Government . . . contends that the thermal imaging was constitutional because it did not 'detect private activities occurring in private areas' The Fourth Amendment's protection of the home has never been tied to measurement of the quality or quantity of information obtained. . . . [T]here is certainly no exception to the warrant requirement for the officer who barely cracks open the front door and sees nothing but the nonintimate rug on the vestibule floor."

Id. at 37. The constitutional analysis does not permit a weighing of the significance of the intrusion:

"While it is certainly possible to conclude from the videotape of the thermal imaging that occurred in [Kyllo] that no 'significant' compromise of the homeowner's privacy has occurred, we must take the long view, from the original meaning of the Fourth Amendment forward. . . . Where, as here, the Government uses a device that is not in general public use, to explore details of the home that would previously have been unknowable without physical intrusion, the surveillance is a 'search' and is presumptively unreasonable without a warrant."

Id. at 40.

Although physical entry is the "chief evil against which the wording of the Fourth Amendment is directed," see Commonwealth v. Lopez, 458 Mass. 383, 390 (2010), it is not the only one.⁷ Where "the Government surreptitiously employs an

⁷ "There was no physical entry in this case. But the search of one's home or office no longer requires physical entry, for science has brought forth far more effective devices

electronic device to obtain information that it could not have obtained by observation from outside," a warrant is required. Karo, 468 U.S. at 715 (revealing location of canister). See Kyllo, 533 U.S. at 34 (revealing internal temperature of house); Blood, 400 Mass. at 70 (revealing contents of verbal conversations). While monitoring via an electronic device may be "less intrusive than a full-scale search," it nonetheless "does reveal a critical fact about the interior of the premises that the Government is extremely interested in knowing and that it could not have otherwise obtained without a warrant," and requires a warrant. See Karo, supra.

In this case, the police looked inside a home, through the use of technology, and determined that the defendant, or at least his cellular telephone, was located there. By inputting

for the invasion of a person's privacy than the direct and obvious methods of oppression which were detested by our forebears and which inspired the Fourth Amendment. Surely the spirit motivating the framers of that Amendment would abhor these new devices no less." (Footnote omitted.)

Goldman v. United States, 316 U.S. 129, 139 (1942) (Murphy, J., dissenting). Several decades after Justice Murphy penned his dissent, the United States Supreme Court adopted his position in Katz v. United States, 389 U.S. 347, 353 (1967). "It is true that the absence of such penetration was at one time thought to foreclose further Fourth Amendment inquiry . . . [but] we have since departed from [that] narrow view." See id. 352-353 (extending Fourth Amendment protections to "the recording of oral statements overheard without any technical trespass under . . . local property law" [quotation and citation omitted]).

the GPS coordinates obtained from the ping into modern mapping technology, there remains no question that the defendant was within a private residence when the police pinged his cellular telephone. The court acknowledges that the same GPS coordinates would, today, "pinpoint the [cellular telephone]'s location to directly inside of the defendant's former girlfriend's home." See ante at note 16. This is information "that could not otherwise have been obtained" without entering the home. See Kyllo, 533 U.S. at 34. See also Andrews, 227 Md. App. at 359, 378, 391 (warrant required because signal "did reveal at least one critical detail about the residence; i.e., that its contents included [the defendant's cellular telephone], and therefore, most likely [the defendant] himself").

The court mistakenly looks to police knowledge of whether their search intruded upon a home.⁸ The court states that, had

⁸ The court disputes whether, in 2012, the capacity existed for police to associate the GPS coordinates with the former girlfriend's home. See ante at note 5. In his postargument letter, the defendant included a copy of the map relied upon by the police, which was introduced as an exhibit at the hearing on the motion to suppress. He contends that, "[a]lthough the heading of the map references a range on the one-block street . . . , the map itself pin-pointed (at 'A') the location of [the particular house in which the defendant was discovered]." The court construes this "arrow" to signify nothing more than "the middle of" the street in question, noting that officers testified that the coordinates, alone, were insufficient to identify any particular home. See id.

The motion judge, who heard the evidence, was not required to credit the officers' testimony in this regard. See

the capability to associate the defendant's GPS coordinates with "the defendant's presence inside of a home" "existed at the time the ping occurred in this case," a search would have occurred. See ante at note 16. This reasoning misses the mark. The inquiry is not whether the police appreciated that they were searching a home, but rather whether the police obtained information concealed within a home.⁹ Here, they did: the defendant's location. Even if they only learned the name of the street, that information came from the cellular telephone within the home.

Of course, police cannot know in advance whether a ping will locate a suspect in a private residence. See Matter of an Application, 849 F. Supp. 2d at 540-541. "[C]ell phones . . . blur the historical distinction between public and private areas

Commonwealth v. Tremblay, 480 Mass. 645, 652 (2018). Instead, he found that there was "no question that the [coordinates] placed [the defendant] inside a private residence." This is hardly "clear error." See id. at 655 n.7; ante at note 5. In any event, the matter is something of a distraction; the question is not whether the police understood that they had obtained location data from within a house, but whether they in fact had done so. See note 9, infra. They had.

⁹ Nor is it of consequence whether the police actually intended to search within a home. It is the individual who has the reasonable expectation of privacy, regardless of the subjective intentions of the officer who initiates the search. See Commonwealth v. Lopez, 458 Mass. 383, 391 (2010) ("we do not consider [the officer's] intent in entering [the home] in determining whether the entry constituted a search in the constitutional sense").

because [they] emit signals from both places." Earls, 214 N.J. at 586. See United States v. Caraballo, 963 F. Supp. 2d 341, 354 (D. Vt. 2013), aff'd, 831 F.3d 95 (2d Cir. 2016), cert. denied, 137 S. Ct. 654 (2017) (defendant's presence on public highway during ping did not remove expectation of privacy, because location information would have been transmitted regardless of whether defendant was in his home or in public). As the Florida Supreme Court has observed, the "warrant requirement cannot protect citizens' privacy if a court determines whether a warrant is required only after the search has occurred, and the incursion into a citizen's private affairs has already taken place." Tracey, 152 So. 3d at 519, quoting Commonwealth vs. Pitt, Mass. Super. Ct., No. 2010-0061 (Norfolk County Feb. 23, 2012). Where the warrant analysis is performed "retrospectively based on the fact that the search resulted in locating the [cellular telephone] inside a home," the law "would provide neither guidance nor deterrence" to the officers. See Andrews, 227 Md. App. at 394.

"Accordingly, there is value in adopting a bright-line rule" Estabrook, 472 Mass. at 858 n.11. See Kyllo, 533 U.S. at 38-39 (finding it impractical to bar thermal imaging of only "intimate details" because police do not "know in advance" what they will find). "[P]olice, trial judges, prosecutors, and defense counsel are entitled to as clear a rule as possible"

regarding whether a real-time ping may be requested without a warrant (citation omitted). Estabrook, supra. By requiring a warrant before conducting a ping, in all cases, we avoid these warrantless intrusions into the home.

4. Exigent circumstances. I concur in the court's conclusion that, although the ping of the defendant's cellular telephone constituted a search, police were exempted from the warrant requirement in this case, due to exigent circumstances. It is important to note that the fact that the suspect shot an individual with a firearm did not, by itself, create an exigency. We repeatedly have "rejected the proposition that 'exigent circumstances always justify a warrantless entry and search in the aftermath of a crime involving a firearm.'" Commonwealth v. Figueroa, 468 Mass. 204, 213 (2014), quoting Commonwealth v. Tyree, 455 Mass. 676, 684 (2010).¹⁰ Here,

¹⁰ The Commonwealth's suggestion that exigent circumstances are present also because the defendant was capable of powering off his cellular telephone to evade capture is unavailing. Such an exception would swallow the rule, as all owners of cellular telephones are capable of powering them off at any time. Moreover, there is some indication that law enforcement may be able to access individuals' location information through their cellular telephones even when the devices are powered off. See *How the NSA Could Bug Your Powered-Off iPhone, and How to Stop Them*, *Wired*, June 3, 2014, <https://www.wired.com/2014/06/nsa-bug-iphone> [<https://perma.cc/FV7B-QCLY>]; *NSA Growth Fueled by Need to Target Terrorists*, *Wash. Post*, Jul. 21, 2013, https://www.washingtonpost.com/world/national-security/nsa-growth-fueled-by-need-to-target-terrorists/2013/07/21/24c93cf4-f0b1-11e2-bed3-b9b6fe264871_story.html?noredirect=on&utm_term=.4d7a16309a81 [<https://perma.cc/3ZQU-X2E8>] ("By September 2004,

however, the suspect was still at large, in possession of a sawed-off shotgun; he had demonstrated his willingness to use that weapon in front of witnesses; he had targeted an apparent stranger; he did not appear to have been provoked; and he had committed the offense in broad daylight. The Commonwealth introduced evidence that the officers were concerned about the ongoing danger to the safety of others posed by the defendant's continued retention of the sawed-off shotgun, and noted this concern on the form that they sent by facsimile to the cellular service provider. Given this, I agree that the order allowing the defendant's motion to suppress must be reversed.

5. Conclusion. Today, Massachusetts joins other States, as well as the majority of Federal courts to have addressed this issue,¹¹ in determining that, before police may demand to know where someone is by means of a cellular telephone, they must

a new NSA technique enabled the agency to find cellphones even when they were turned off").

¹¹ A majority of Federal courts that have confronted this question have required a showing of probable cause to a neutral magistrate before police may search real-time cellular telephone location information under the Fourth Amendment. See *Validity of Use of Cellular Telephone or Tower to Track Prospective, Real Time, or Historical Position of Possessor of Phone Under Fourth Amendment*, 92 A.L.R. Fed. 2d 1, §§ 4-8 (2015) (collecting cases). See also *In re Applications of the U.S.A. for Orders Pursuant to Title 18, U.S. Code Section 2703(d)*, 509 F. Supp. 2d 76, 78 & n.4 (D. Mass. 2007). Cf. *United States v. Ellis*, 270 F. Supp. 3d 1134, 1145, 1149 (N.D. Cal. 2017) (requiring "warrant supported by a showing of probable cause" in order to use cell site simulator "to locate a [cellular telephone]").

first obtain a warrant supported by probable cause. The detection of an individual's real-time location, by means of a cellular telephone, violates the individual's reasonable expectation of privacy. It is unnecessary for the court to rely upon the fact that the government manipulated a cellular telephone in this case in order to reach this conclusion.

New technologies hold great promise for helping to solve modern crimes. Doubtless, we will continue to develop increasingly advanced tools to aid law enforcement in the years to come. But as our capacity for surveillance grows, we must be mindful to preserve individuals' constitutional rights. We must be wary of the "all-powerful government, proclaiming law and order, efficiency, and other benign purposes," when it seeks to "penetrate all the walls and doors" behind which we might shelter. United States v. White, 401 U.S. 745, 756 (1971) (Douglas, J., dissenting). There must always be judicial oversight interposed between the government and the individual it seeks to observe, lest we allow the guarantees of privacy to slip away -- not because we no longer needed them, but because we left them behind in our rush toward progress.

GANTS, C.J. (concurring, with whom Gaziano and Lowy, JJ., join). I agree with the court's conclusion that a warrant is required to search the real-time location of an individual's cellular telephone (cell phone). I also agree that, under the exigent circumstances exception to the search warrant requirement, the police in this case could lawfully obtain the assistance of the cellular company to "ping" the defendant's cell phone -- without prior judicial authorization -- because time was of the essence to determine his location in order to arrest him for the brutal killing. I write separately only because this case highlights the need for Massachusetts to join the majority of other States in allowing warrants to be obtained by telephone or other reliable electronic means so that, in the future, a warrant can reasonably be obtained promptly where time is of the essence.

In 1973, before the widespread use of cell phones, cell site location information, global positioning systems installed in cell phones, and electronic mail messages (e-mail), the National Advisory Commission on Criminal Justice Standards and Goals recommended that "every State enact legislation that provides for the issuance of search warrants pursuant to telephoned petitions and affidavits from police officers." National Advisory Commission on Criminal Justice Standards and Goals, Report on Police 95 (1973) (noting that "[l]engthy delays

in obtaining search warrants are the chief reason that police officers rely upon exceptions to the rule requiring warrants"). See American Bar Association Project on Standards for Criminal Justice, Standards Relating to the Urban Police Function 257 (Mar. 1972) (highlighting "the time and effort required to obtain a search warrant . . . [because of] the frequent unavailability of the magistrate," and recommending that "new procedures . . . be devised to simplify the warrant process"). Since then, advances in technology have enabled police officers to apply for warrants remotely -- that is, without physically appearing before a judge or magistrate -- through a variety of means other than a telephone, including e-mail and video conferencing. See Missouri v. McNeely, 569 U.S. 141, 154 (2013). In 2013, the United States Supreme Court identified thirty-six States that permit remote warrant applications in at least some circumstances. Id. at 154 n.4.¹ Since the McNeely

¹ All thirty-six continue to permit remote search warrant applications. See Alaska Stat. § 12.35.015; Ariz. Rev. Stat. Ann. §§ 13-3914(C), 13-3915(D), (E); Ark. Code Ann. § 16-82-201; Cal. Penal Code § 1526(b); Ga. Code Ann. § 17-5-21.1; Idaho Code §§ 19-4404, 19-4406; Ind. Code § 35-33-5-8; Iowa Code § 808.3(1)(b); Kan. Stat. Ann. §§ 22-2502(a), 22-2504; La. Code Crim. Proc. Ann. art. 162.1(B), (D); Mich. Comp. Laws § 780.651(2)-(7); Mo. Rev. Stat. § 542.276.3, .7; Mont. Code Ann. §§ 46-5-221, 46-5-222; Neb. Rev. Stat. §§ 29-814.01, 29-814.03, 29-814.05; Nev. Rev. Stat. § 179.045(2); N.H. Rev. Stat. Ann. § 595-A:4-a; N.Y. Crim. Proc. Law §§ 690.35(1), 690.36(1), 690.40(3), 690.45(1), (2); N.C. Gen. Stat. § 15A-245(a)(3); Okla. Stat. tit. 22, §§ 1223.1, 1225(B); Ore. Rev. Stat. § 133.545(7)-(8); S.D. Codified Laws §§ 23A-35-4.2, 23A-35-5,

opinion was issued, at least six more States have enacted statutes or procedural rules permitting remote search or arrest warrant applications.² Moreover, the Federal Rules of Criminal Procedure permit Federal magistrate judges to consider sworn information that is provided in support of a search warrant or an arrest warrant application "by telephone or other reliable electronic means," and to transmit to the applicant the approved warrant by those same means. See Fed. R. Crim. P. 4.1; Fed. R. Crim. P. 41(d)(3).

No comparable rule of criminal procedure can be promulgated in Massachusetts by this court, however, because G. L. c. 276, § 2B, provides that "[a] person seeking a search warrant shall appear personally before a court or justice authorized to issue search warrants in criminal cases and shall give an affidavit in substantially the form hereinafter prescribed" (emphasis added).

23A-35-6; Va. Code Ann. § 19.2-54; Wis. Stat. § 968.12(3); Ala. R. Crim. P. 3.8(b); Colo. R. Crim. P. 41(c)(3); Haw. R. Penal P. 41(h)-(i) (2013); Minn. R. Crim. P. 33.05, 36.01-36.08; N.J. R. Crim. P. 3:5-3(b); N.M. Dist. Cts. R. Crim. P. 5-211(F)(3), (G)(3); N.D. R. Crim. P. 41(c)(2); Ohio R. Crim. P. 41(C)(1)-(2); Pa. R. Crim. P. 203(A), (C); Utah R. Crim. P. 40(I); Vt. R. Crim. P. 41(d)(4), (i)(2); Wash. Super. Ct. Crim. R. 2.3(c); Wyo. R. Crim. P. 41(d)(3)-(4).

² See Fla. Stat. §§ 901.02(3)-(4), 933.07(3)-(4); 725 Ill. Comp. Stat. 5 / § 108-4(c)(1); Md. Code Ann., Crim. Proc. § 1-203(a)(2)(ii)-(iv); Tex. Code Crim. Proc. Ann. art. 18.01(b-1)(1); Del. J. P. Ct. Crim. R. 4(g) (applicable only to issuance of arrest warrants by Justice of the Peace Court); Me. R. U. Crim. P. R. 41C.

We have permitted a law enforcement officer to obtain a search warrant by telephone or facsimile transmission only where "the officer exhausted all reasonable efforts to find a judge before whom he could personally appear." Commonwealth v. Nelson, 460 Mass. 564, 573 (2011). In all other circumstances, our law requires officers to find and personally appear before a magistrate or judge. Id. at 569-570.

In determining whether the exigency exception to the search warrant requirement justifies the failure of the police to obtain prior judicial approval of a search, we consider the amount of time necessary to obtain a warrant. See Commonwealth v. Tyree, 455 Mass. 676, 690-691 (2010) ("In evaluating whether exigent circumstances existed, we also have placed particular emphasis on whether police consider[ed] how long it would take to obtain a warrant before acting" [quotation and citation omitted]); Commonwealth v. Forde, 367 Mass. 798, 801-803 (1975). Where time is of the essence, as it often is when law enforcement seeks to ping a cell phone to determine a suspect's location, the more time that is needed to obtain a warrant, the greater the need for law enforcement to invoke the exigency exception. The length of time required to obtain a warrant depends on the length of three time periods: (1) the time needed to write an affidavit and particularize an application and warrant, (2) the time needed to locate a judge or magistrate

(or reasonably exhaust efforts to locate him or her), and (3) the time needed to appear before the magistrate or judge and obtain his or her signature. The second and third time periods could be considerably shortened, especially when the court house is closed, if Massachusetts were to join the Federal government and at least forty-two States in allowing warrants to be approved by reliable electronic means. See McNeely, 569 U.S. at 172-173 (Roberts, C.J., concurring in part and dissenting in part) (noting that in Utah, under State electronic search warrant procedure, "[j]udges have been known to issue warrants in as little as five minutes").

Today, modern technology can be applied to enable substantially quicker electronic application procedures that satisfy the requirements of art. 14 of the Massachusetts Declaration of Rights and the Fourth Amendment to the United States Constitution. In California, for example, the statutory scheme explicitly provides that a magistrate may receive an officer's affidavit via e-mail with an electronic signature, and then issue the warrant with an electronic signature and transmit it back via e-mail; this document is considered the original warrant. See Cal. Penal Code § 1526(b). Moreover, if a magistrate wishes to see the affiant raise his or her right hand to swear to the truth of the affidavit, the magistrate may use face-to-face video technology -- such as Skype or FaceTime

software -- in the issuance of warrants. See Bean, Swearing by New Technology: Strengthening the Fourth Amendment by Utilizing Modern Warrant Technology While Satisfying the Oath or Affirmation Clause, 2014 B.Y.U. L. Rev. 927, 945-946.

The court in its decision recognizes that law enforcement, after properly obtaining a warrant or facing exigent circumstances, may employ Twenty-first Century technologies to solve Twenty-first Century crimes. But requiring officers to locate and then personally appear before a judge or magistrate when the court house is closed -- or when the affiant is far away from the judge or magistrate -- is hardly a Twenty-first Century procedure. I believe that our opinion today underscores the need for the Legislature to give careful consideration to amending G. L. c. 276, § 2B, to permit warrants to be applied for and approved remotely through reliable electronic means so that judicial approval may be sought and obtained in a timely manner.