

CITY OF SEATTLE
ORDINANCE 126774
COUNCIL BILL 120502

AN ORDINANCE relating to surveillance technology implementation; authorizing approval of uses and accepting the 2022 surveillance impact report and 2022 executive overview for the Seattle Police Department’s use of GeoTime.

WHEREAS, Section 14.18.020 of the Seattle Municipal Code (SMC), enacted by Ordinance 125376 and last amended by Ordinance 125679, requires City Council approval of a surveillance impact report (SIR) related to uses of surveillance technology, with existing/retroactive technology to be placed on a Master Technology List; and

WHEREAS, SMC 14.18.020 applies to GeoTime in use by the Seattle Police Department (SPD); and

WHEREAS, the Seattle Police Department conducted policy rule review and community review as part of the development of the GeoTime SIR; and

WHEREAS, SMC 14.18.080, enacted by Ordinance 125679, also requires review of the GeoTime SIR by the Community Surveillance Working Group, composed of relevant stakeholders, and a statement from the Chief Technology Officer in response to the Working Group’s recommendations; and

WHEREAS, development of the GeoTime SIR and review by the Working Group has been completed; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Pursuant to Ordinances 125376 and 125679, the City Council approves use of the Seattle Police Department’s GeoTime. The City Council accepts the August 30, 2022, Surveillance Impact Report (SIR) for this technology, attached to this ordinance as Attachment

1, and the Executive Overview for the same technology, attached to this ordinance as Attachment 2.


Section 2. The Council requests the Seattle Police Department (SPD) to work with the Office of Inspector General (OIG) to develop and provide to the Chief Technology Officer, no later than August 31, 2023, metrics for use in the annual equity assessments of GeoTime. The Council requests SPD to work with the OIG to develop an audit log for GeoTime, considering the equity metrics, by December 31, 2023 to support the Office of Inspector General’s identification of potential disproportionate impacts in its annual surveillance technology usage review.

Section 3. The Council requests the Seattle Police Department to develop a policy or policies no later than December 31, 2023 specific to a youth’s consent relative to deployment of GeoTime reflecting the provisions of Ordinance 126132, which requires Seattle Police


1 Department (SPD) officers to make available legal counsel for any youth that would be
2 questioned or searched in certain situations.

3 Section 4. This ordinance shall take effect and be in force 30 days after its approval by
4 the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it
5 shall take effect as provided by Seattle Municipal Code Section 1.04.020.


1 Passed by the City Council the 28th day of February, 2023,
2 and signed by me in open session in authentication of its passage this 28th day of
3 February, 2023.

4 
5 President _____ of the City Council

6 ☒ Approved / ☐ returned unsigned / ☐ vetoed this 2nd day of March, 2023.

7 
8 Bruce A. Harrell, Mayor

9 Filed by me this 2nd day of March, 2023.

10 
11 Elizabeth M. Adkisson, Interim City Clerk

12 (Seal)

13 Attachments:

14 Attachment 1 - 2022 Surveillance Impact Report: GeoTime

15 Attachment 2 - 2022 Surveillance Impact Report Executive Overview: GeoTime

2022 Surveillance Impact Report

GeoTime

Seattle Police Department

Surveillance Impact Report (“SIR”) overview

About the Surveillance Ordinance

The Seattle City Council passed Ordinance [125376](#), also referred to as the “Surveillance Ordinance,” on September 1, 2017. SMC 14.18.020.b.1 charges the City’s executive with developing a process to identify surveillance technologies subject to the ordinance. Seattle IT, on behalf of the executive, developed and implemented a process through which a privacy and surveillance review is completed prior to the acquisition of new technologies. This requirement, and the criteria used in the review process, are documented in [Seattle IT Policy PR-02](#), the “Surveillance Policy”.

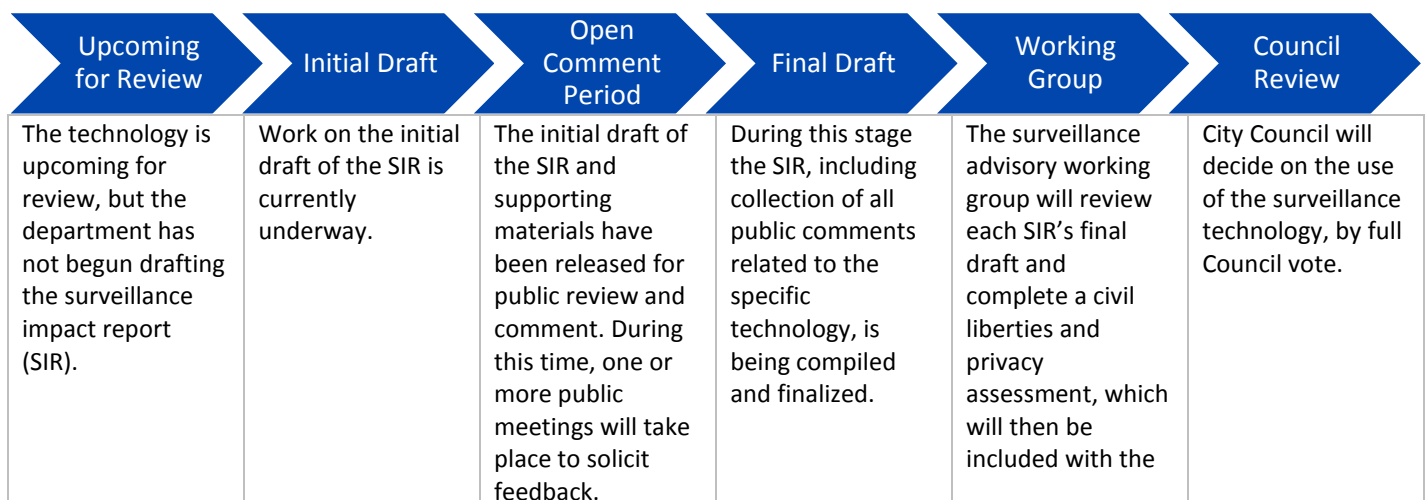
How this Document is Completed

This document is completed by the requesting department staff, support and coordinated by the Seattle Information Technology Department (“Seattle IT”). As Seattle IT and department staff complete the document, they should keep the following in mind.

1. Responses to questions should be in the text or check boxes only; all other information (questions, descriptions, etc.) should **not** be edited by the department staff completing this document.
2. All content in this report will be available externally to the public. With this in mind, avoid using acronyms, slang, or other terms which may not be well-known to external audiences. Additionally, responses should be written using principally non-technical language to ensure they are accessible to audiences unfamiliar with the topic.

Surveillance Ordinance Review Process

The following is a high-level outline of the complete SIR review process.



				SIR and submitted to Council.	
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Privacy Impact Assessment

Purpose

A Privacy Impact Assessment (“PIA”) is a method for collecting and documenting detailed information collected in order to conduct an in-depth privacy review of a program or project. A PIA asks questions about the collection, use, sharing, security and access controls for data that is gathered using a technology or program. It also requests information about policies, training and documentation that govern use of the technology. The PIA responses are used to determine privacy risks associated with a project and mitigations that may reduce some or all of those risks. In the interests of transparency about data collection and management, the City of Seattle has committed to publishing all PIAs on an outward facing website for public access.

When is a Privacy Impact Assessment Required?

A PIA may be required in two circumstances.

1. When a project, technology, or other review has been flagged as having a high privacy risk.
2. When a technology is required to complete the surveillance impact report process. This is one deliverable that comprises the report.

1.0 Abstract

1.1 Please provide a brief description (one paragraph) of the purpose and proposed use of the project/technology.

GeoTime is geospatial analysis software that allows the visual analysis of events over time. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

1.2 Explain the reason the project/technology is being created or updated and why the PIA is required.

GeoTime is used to aid in the investigation of crime by helping detectives analyze location information over time and present patterns in the data. Analyzing observations over time and geography is a common task but typically requires multiple, separate tools. GeoTime is an application which has been developed to visualize the spatial inter-connectedness of information over time and geography. A PIA is required because some members of the public may be concerned that this software could be used to track members of the community who are not associated with the investigation.

2.0 Project / Technology Overview

Provide an overview of the project or technology. The overview gives the context and background necessary to understand the purpose, mission and justification for the project / technology proposed

2.1 Describe the benefits of the project/technology.

Visualizing criminal information provides investigators a more thorough understanding of complicated criminal investigations. GeoTime reduces the time and effort required of investigators to analyze large amounts of data which translates into a better and more efficient work product.

2.2 Provide any data or research demonstrating anticipated benefits.

A multitude of scholarly studies have shown that the GeoTime technology is a highly effective technique in the analysis of complex geographical information with temporal context.

Kapler, T., & Wright, W. (2005). Geotime information visualization. *Information visualization*, 4(2), 136-146.

Eccles, R., Kapler, T., Harper, R., & Wright, W. (2008). Stories in geotime. *Information Visualization*, 7(1), 3-17.

Tiwari, R. K., & Rekapalli, R. (2021). Advances in Geo-Time Series Modelling. *Journal of the Geological Society of India*, 97(10), 1313-1322.

2.3 Describe the technology involved.

GeoTime is geospatial analysis software locally installed on select licensed SPD workstations that allows investigators to analyze events over time. Investigators can also access GeoTime through an online internet accessible portal. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

2.4 Describe how the project or use of technology relates to the department's mission.

The mission of the Seattle Police Department is to prevent crime, enforce the law, and support quality public safety by delivering respectful, professional, and dependable police services. SPD's department priorities include the use of best practices that include officer safety guidelines and performance-based accountability to provide progressive and responsive police services to crime victims, witnesses, and all members of the community, and to structure the organization to support the SPD mission and field a well-trained sworn and non-sworn workforce that uses technology, training, equipment, and research strategically and effectively. The utilization of GeoTime increases efficiency of investigations, availability of data, awareness of situational information, and timeliness of actionable information to officers on the street.

2.5 Who will be involved with the deployment and use of the project / technology?

Only trained, backgrounded, and CJIS certified SPD detectives have access to GeoTime. All authorized users of GeoTime are Criminal Justice Information Services (CJIS) certified and maintain Washington State ACCESS (A Central Computerized Enforcement Service System) certification. More information on CJIS compliance may be found at the CJIS Security Policy [website](#). Additional information about ACCESS may be found on the Washington State Patrol's [website](#).

3.0 Use Governance

Provide an outline of any rules that will govern the use of the project / technology. Please note: non-City entities contracting with the City are bound by restrictions specified in the surveillance ordinance and privacy principles and must provide written procedures for how the entity will comply with any restrictions identified.

3.1 Describe the processes that are required prior to each use, or access to the technology, such as a notification, or check-in, check-out of equipment.

GeoTime is only used during the investigation of crimes by SPD detectives. Access for personnel into the system is predicated on state and federal law governing access to Criminal Justice Information Services (CJIS). This includes pre-access background information, appropriate role-based permissions as governed by the CJIS security policy, and audit of access and transaction logs within the system. All users of GeoTime must be CJIS certified and maintain Washington State ACCESS certification.

3.2 List the legal standards or conditions, if any, that must be met before the project / technology is used.

GeoTime is only used during the investigation of crimes by the SPD.

All use of GeoTime must also comply [with SPD Policy 12.050 – Criminal Justice Information Systems](#) and may only be used for legitimate criminal investigative purposes.

Use of GeoTime is governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

The data analyzed using GeoTime is obtained by investigators under the execution of court ordered warrants, including data from cellular providers and from data extracted from mobile devices (see SIR- Computer, Cellphone, & Mobile Device Extraction Tools).

3.3 Describe the policies and training required of all personnel operating the project / technology, and who has access to ensure compliance with use and management policies.

Supervisors and commanding officers are responsible for ensuring compliance with policies.

All SPD employees must adhere to laws, City policy, and Department Policy ([SPD Policy 5.001](#)), and any employees suspected of being in violation of laws or policy or other misconduct are subject to discipline, as outlined in [SPD Policy 5.002](#).

[SPD Policy 12.050](#) defines the proper use of criminal justice information systems.

4.0 Data Collection and Use

4.1 Provide details about what information is being collected from sources other than an individual, including other IT systems, systems of record, commercial data aggregators, publicly available data and/or other City departments.

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

4.2 What measures are in place to minimize inadvertent or improper collection of data?

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

4.3 How and when will the project / technology be deployed or used? By whom? Who will determine when the project / technology is deployed and used?

GeoTime is only used during the investigation of crimes by SPD detectives.

4.4 How often will the technology be in operation?

GeoTime is utilized frequently by investigators during the investigation of crimes.

4.5 What is the permanence of the installation? Is it installed permanently, or temporarily?

Permanent.

4.6 Is a physical object collecting data or images visible to the public? What are the markings to indicate that it is in use? What signage is used to determine department ownership and contact information?

No, GeoTime is a software program.

4.7 How will data that is collected be accessed and by whom?

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

The files created with GeoTime are stored within investigation files for the case.

Access to GeoTime requires SPD personnel to log in with password-protected login credentials which are granted to employees with business needs to access GeoTime. These employees are ACCESS and CJIS certified.

According to the CJIS security policy, "The agency shall configure the application, service, or information system to provide only essential capabilities and shall specifically prohibit and/or restrict the use of specified functions, ports, protocols, and/or services."

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

4.8 If operated or used by another entity on behalf of the City, provide details about access, and applicable protocols.

No outside agency has direct access to the software.

4.9 What are acceptable reasons for access to the equipment and/or data collected?

Data is only accessed as part of ongoing criminal investigations or under the City of Seattle Intelligence Ordinance.

4.10 What safeguards are in place, for protecting data from unauthorized access (encryption, access control mechanisms, etc.) And to provide an audit trail (viewer logging, modification logging, etc.)?

Only authorized SPD users can access the system, technology, or the data. Access to the application is limited to SPD personnel via password-protected login credentials.

Data is securely input and used on SPD's password-protected network with access limited to authorized users.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

SPD's Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. The Office of Inspector General and the federal monitor can also access all data and audit for compliance at any time.

5.0 Data Storage, Retention and Deletion

5.1 How will data be securely stored?

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

5.2 How will the owner allow for departmental and other entities, to audit for compliance with legal deletion requirements?

SPD's Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. In addition, the Office of Inspector General can access all data and audit for compliance at any time.

SPD conducts periodic reviews of audit logs and they are available for review at any time by the Seattle Intelligence Ordinance Auditor under the City of Seattle Intelligence Ordinance. The software automatically alerts users of data that must be deleted under legal deletion requirements such as 28 CFR Part 23.

5.3 What measures will be used to destroy improperly collected data?

SPD policy contains multiple provisions to avoid improperly collecting data. [SPD Policy 7.010](#) governs the submission of evidence and requires that all collected evidence be documented in a GO Report. [SPD Policy 7.090](#) specifically governs the collection and submission of photographic evidence. Evidence is submitted to the Evidence Unit and associated with a specific GO Number and investigation. And, [SPD Policy 7.110v](#) governs the collection and submission of audio recorded statements. It requires that officers state their name, the Department name, the General Offense number, date and time of recording, the name of the interviewee, and all persons present at the beginning of the recording.

Additionally, [SPD Policy 5.140](#) forbids bias-based policing and outlines processes for reporting and documenting any suspected bias-based behavior, as well as accountability measures.

All SPD employees must adhere to laws, City policy, and Department Policy ([SPD Policy 5.001](#)), and any employees suspected of being in violation of laws or policy or other misconduct are subject to discipline, as outlined in [SPD Policy 5.002](#).

Per the CJIS Security Policy:

“5.8.3 Digital Media Sanitization and Disposal The agency shall sanitize, that is, overwrite at least three times or degauss digital media prior to disposal or release for reuse by unauthorized individuals. Inoperable digital media shall be destroyed (cut up, shredded, etc.). The agency shall maintain written documentation of the steps taken to sanitize or destroy electronic media. Agencies shall ensure the sanitization or destruction is witnessed or carried out by authorized personnel.

5.8.4 Disposal of Physical Media Physical media shall be securely disposed of when no longer required, using formal procedures. Formal procedures for the secure disposal or destruction of physical media shall minimize the risk of sensitive information compromise by unauthorized individuals. Physical media shall be destroyed by shredding or incineration. Agencies shall ensure the disposal or destruction is witnessed or carried out by authorized personnel.”

5.4 Which specific departmental unit or individual is responsible for ensuring compliance with data retention requirements?

Unit supervisors are responsible for ensuring compliance with data retention requirements within SPD.

Audit, Policy & Research Section personnel can also conduct audits of all data collection software and systems. Additionally, any appropriate auditor, including the Office of Inspector General and the federal monitor can audit for compliance at any time.

6.0 Data Sharing and Accuracy

6.1 Which entity or entities inside and external to the City will be data sharing partners?

No person, outside of SPD, has direct access to GeoTime.

Data analyzed by GeoTime may be shared outside SPD with the other agencies, entities, or individuals within legal guidelines or as required by law.

Data may be shared with outside entities in connection with criminal prosecutions:

- Seattle City Attorney's Office
- King County Prosecuting Attorney's Office
- King County Department of Public Defense
- Private Defense Attorneys
- Seattle Municipal Court
- King County Superior Court
- Similar entities where prosecution is in Federal or other State jurisdictions

Data may be made available to requesters pursuant to the Washington Public Records Act, [Chapter 42.56 RCW](#) ("PRA"). SPD will apply applicable exemptions to the data before disclosing to a requester. Individuals have the right to inspect criminal history record information maintained by the department ([RCW 10.97.030](#), [SPD Policy 12.050](#)). Individuals can access their own information by submitting a public disclosure request.

Per [SPD Policy 12.080](#), the Crime Records Unit is responsible for receiving, recording, and responding to requests "for General Offense Reports from other City departments and from other law enforcement agencies, as well as from insurance companies."

Discrete pieces of data analyzed by GeoTime may be shared with other law enforcement agencies in wanted bulletins, and in connection with law enforcement investigations jointly conducted with those agencies, or in response to requests from law enforcement agencies investigating criminal activity as governed by [SPD Policy 12.050](#) and [12.110](#). All requests for data from Federal Immigration and Customs Enforcement (ICE) authorities are referred to the Mayor's Office Legal Counsel in accordance with the Mayoral Directive, dated February 6, 2018.

SPD shares data with authorized researchers pursuant to properly execute research and confidentiality agreements as provide by [SPD Policy 12.055](#). This sharing may include discrete pieces of data related to specific investigative files analyzed by this application.

6.2 Why is data sharing necessary?

Data sharing is frequently necessary during the course of a criminal investigation to follow up on leads and gather information on suspects from outside law enforcement agencies. Cooperation between law enforcement agencies is an essential part of the investigative process. For example, an investigator may send out a photo or description of a homicide suspect in order to find out if another LE agency knows their identity.

Products developed using this information may be shared with other law enforcement agencies. All products created with the information used in this project will be classified as Law Enforcement Sensitive. Any bulletins will be marked with the following restrictions: LAW ENFORCEMENT SENSITIVE — DO NOT LEAVE PRINTED COPIES UNATTENDED — DISPOSE OF IN SHREDDER ONLY — NOT FOR PUBLIC DISPLAY OR DISTRIBUTION — DO NOT FORWARD OR COPY.

6.3 Are there any restrictions on non-City data use?

Yes ☒ No ☐

6.3.1 If you answered yes, provide a copy of the department's procedures and policies for ensuring compliance with these restrictions.

Law enforcement agencies receiving criminal history information are subject to the requirements of [28 CFR Part 20](#). In addition, Washington State law enforcement agencies are subject to the provisions of [WAC 446-20-260](#), and [RCW Chapter 10.97](#).

Once disclosed in response to PRA request, there are no restrictions on non-City data use; however, applicable exemptions will be applied prior to disclosure to any requestor who is not authorized to receive exempt content.

6.4 How does the project/technology review and approve information sharing agreements, memorandums of understanding, new uses of the information, new access to the system by organizations within City of Seattle and outside agencies?

Research agreements must meet the standards reflected in [SPD Policy 12.055](#). Law enforcement agencies receiving criminal history information are subject to the requirements of [28 CFR Part 20](#). In addition, Washington State law enforcement agencies are subject to the provisions of [WAC 446-20-260](#), and [RCW Chapter 10.97](#).

Following Council approval of the SIR, SPD must seek Council approval for any material change to the purpose or manner in which the GeoTime may be used.

6.5 Explain how the project/technology checks the accuracy of the information collected. If accuracy is not checked, please explain why.

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files.

6.6 Describe any procedures that allow individuals to access their information and correct inaccurate or erroneous information.

Individuals may request records pursuant to the PRA, and individuals have the right to inspect criminal history record information maintained by the department ([RCW 10.97.030](#), [SPD Policy 12.050](#)). Individuals can access their own information by submitting a public disclosure request.

7.0 Legal Obligations, Risks and Compliance

7.1 What specific legal authorities and/or agreements permit and define the collection of information by the project/technology?

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files.

All use of GeoTime must also comply with SPD Policy 12.050 – Criminal Justice Information Systems and may only be used for legitimate criminal investigative purposes.

Use of GeoTime will be governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

7.2 Describe what privacy training is provided to users either generally or specifically relevant to the project/technology.

Users of GeoTime undergo training on the use of the software.

All authorized users of GeoTime must be CJIS certified and must maintain Washington State ACCESS certification.

SPD Policy 12.050 mandates that all employees receive Security Awareness Training (Level 2), and all employees also receive City Privacy Training. All SPD employees must adhere to laws, City policy, and Department Policy (SPD Policy 5.001), many of which contain specific privacy requirements. Any employees suspected of being in violation of laws or policy or other misconduct are subject to discipline, as outlined in SPD Policy 5.002.

The CJIS training requirements can be found in the appendices of this document, as well as in question 3.3, above.

7.3 Given the specific data elements collected, describe the privacy risks identified and for each risk, explain how it was mitigated. Specific risks may be inherent in the sources or methods of collection, or the quality or quantity of information included.

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files.

The nature of the Department's mission will inevitably lead it to collect and maintain information many may believe to be private and potentially embarrassing. Minimizing privacy risks revolve around disclosure of personally identifiable information.

The primary privacy risk with this system pertains to Personally Identifiable Information (PII) being added on individuals not directly associated with criminal activity. To mitigate this risk, users only add PII on individuals associated with a criminal investigation and/or collected in accordance with the City of Seattle Intelligence Ordinance. In addition, SPD conducts regular reviews of audit logs to ensure proper use and retention of the data.

7.4 Is there any aspect of the project/technology that might cause concern by giving the appearance to the public of privacy intrusion or misuse of personal information?

The public may express concern over the consolidation of so much information about individuals, but all of the data that is input into GeoTime is already available to investigators. GeoTime simply works to make accessing and analyzing that information more efficient.

8.0 Monitoring and Enforcement

8.1 Describe how the project/technology maintains a record of any disclosures outside of the department.

The information analyzed by the GeoTime software relates to ongoing criminal investigations. Information will be released in response to public disclosure requests as applicable under the Public Records Act and the City of Seattle Intelligence Ordinance, just as they are applicable to any other SPD investigative records.

Per SPD Policy 12.080, requests for public disclosure are logged by SPD's Legal Unit. Any action taken, and data released subsequently in response to subpoenas is then tracked through a log maintained by the Legal Unit. Public disclosure requests are tracked through the City's GovQA Public Records Response System, and responses to Public Disclosure Requests, including responsive records provided to a requestor, are retained by SPD for two years after the request is completed.

8.2 What auditing measures are in place to safeguard the information, and policies that pertain to them, as well as who has access to the audit data? Explain whether the project/technology conducts self-audits, third party audits or reviews.

SPD's Audit, Policy and Research Section is authorized to conduct audits of all investigative data collection software and systems. In addition, the Office of Inspector General and the federal monitor can conduct audits of the software, and its use, at any time. Audit data is available to the public via Public Records Request.

Financial Information

Purpose

This section provides a description of the fiscal impact of the surveillance technology, as required by the surveillance ordinance.

1.1 Fiscal Impact

Provide a description of the fiscal impact of the project/technology by answering the questions below.

1.1 Current or potential sources of funding: initial acquisition costs.

Current ☒ potential ☐

Date of initial acquisition	Date of go live	Direct initial acquisition cost	Professional services for acquisition	Other acquisition costs	Initial acquisition funding source
4/1/2016	-	\$4,630	-	-	SPD Budget

Notes:

N/A

1.2 Current or potential sources of funding: on-going operating costs, including maintenance, licensing, personnel, legal/compliance use auditing, data retention and security costs.

Current ☒ potential ☐

Annual maintenance and licensing	Legal/compliance, audit, data retention and other security costs	Department overhead	IT overhead	Annual funding source
\$5500	-	-	-	SPD Budget

Notes:

Annual Maintenance Renewal of 2 concurrent seats of GeoTime Software.

1.3 Cost savings potential through use of the technology

This tool has proven to be extremely valuable in many investigations. Quantifying the cost savings through this technology is difficult as the primary purpose is to improve the department's effectiveness at reducing crime and improving public safety.

1.4 Current or potential sources of funding including subsidies or free products offered by vendors or governmental entities

N/A

Expertise and References

Purpose

The following information is provided to ensure that Council has a group of experts to reference while reviewing the completed surveillance impact report (“SIR”). Any individuals or agencies referenced must be made aware ahead of publication that their information has been included. All materials must be available for Council to access or review, without requiring additional purchase or contract.

1.0 Other Government References

Please list any other government bodies that have implemented this technology and can speak to the implementation of this technology.

Agency, municipality, etc.	Primary contact	Description of current use
N/A	N/A	N/A

2.0 Academics, Consultants, and Other Experts

Please list any experts in the technology under consideration, or in the technical completion of the service or function the technology is responsible for.

Agency, municipality, etc.	Primary contact	Description of current use
N/A	N/A	N/A

3.0 White Papers or Other Documents

Please list any authoritative publication, report or guide that is relevant to the use of this technology or this type of technology.

Title	Publication	Link
Kapler, T., & Wright, W. (2005). Geotime information visualization. <i>Information visualization</i> , 4(2), 136-146.		http://www.cs.umd.edu/hcil/VASTcontest06/SUBMITTED/Oculus-nSpace&GeoTime/Oculus-nSpace&GeoTime/ref%20papers/KaplerWright_GeoTime_InfoViz_Final_Conf.pdf

Racial Equity Toolkit (“RET”) and engagement for public comment worksheet

Purpose

Departments submitting a SIR are required to complete an adapted version of the Racial Equity Toolkit (“RET”) in order to:

- Provide a framework for the mindful completion of the SIR in a way that is sensitive to the historic exclusion of vulnerable and historically underrepresented communities. Particularly, to inform the public engagement efforts departments will complete as part of the surveillance impact report.
- Highlight and mitigate any impacts on racial equity from the adoption and the use of the technology.
- Highlight and mitigate any disparate impacts on individuals or vulnerable communities.
- Fulfill the public engagement requirements of the surveillance impact report.

Adaptation of the RET for Surveillance Impact Reports

The RET was adapted for the specific use by the Seattle Information Technology Departments’ (“Seattle IT”) Privacy Team, the Office of Civil Rights (“OCR”), and Change Team members from Seattle IT, Seattle City Light, Seattle Fire Department, Seattle Police Department, and Seattle Department of Transportation.

Racial Equity Toolkit Overview

The vision of the Seattle Race and Social Justice Initiative (“RSJI”) is to eliminate racial inequity in the community. To do this requires ending individual racism, institutional racism and structural racism. The RET lays out a process and a set of questions to guide the development, implementation and evaluation of policies, initiatives, programs, and budget issues to address the impacts on racial equity.

1.0 Set Outcomes

1.1. Seattle City Council has defined the following inclusion criteria in the surveillance ordinance, and they serve as important touchstones for the risks departments are being asked to resolve and/or mitigate. Which of the following inclusion criteria apply to this technology?

- ☐ The technology disparately impacts disadvantaged groups.
- ☐ There is a high likelihood that personally identifiable information will be shared with non-City entities that will use the data for a purpose other than providing the City with a contractually agreed-upon service.
- ☐ The technology collects data that is personally identifiable even if obscured, de-identified, or anonymized after collection.
- ☒ The technology raises reasonable concerns about impacts to civil liberty, freedom of speech or association, racial equity, or social justice.

1.2 What are the potential impacts on civil liberties through the implementation of this technology? How is the department mitigating these risks?

GeoTime is an application which has been developed to visualize the spatial inter-connectedness of information over time and geography. Members of the public may be concerned that this software could be used to track members of the community who are not associated with the investigation.

SPD mitigates this risk several ways:

GeoTime is only used during the investigation of crimes.

All use of GeoTime must also comply [with SPD Policy 12.050 – Criminal Justice Information Systems](#) and may only be used for legitimate criminal investigative purposes.

Use of GeoTime is governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

The data analyzed using GeoTime is obtained by investigators under during the execution of court ordered warrants.

1.3 What are the risks for racial or ethnicity-based bias through each use or deployment of this technology? How is the department mitigating these risks?

Include a description of any issues that may arise such as algorithmic bias or the possibility for ethnic bias to emerge in people and/or system decision-making.

The mission of the Seattle Police Department is to prevent crime, enforce the law, and support quality public safety by delivering respectful, professional, and dependable police services. To mitigate against any potential algorithmic bias or ethnic bias to emerge in the use of GeoTime, SPD employees are responsible for gathering, creating, and disseminating information (internally or externally as defined above) and are bound by SPD Policy 5.140 which forbids bias-based policing and outlines processes for reporting and documenting any suspected bias-based behavior, as well as accountability measures.

1.4 Where in the City is the technology used or deployed?

☒ all Seattle neighborhoods

- | | |
|--|--|
| <input type="checkbox"/> Ballard | <input type="checkbox"/> Northwest |
| <input type="checkbox"/> Belltown | <input type="checkbox"/> Madison Park / Madison Valley |
| <input type="checkbox"/> Beacon Hill | <input type="checkbox"/> Magnolia |
| <input type="checkbox"/> Capitol Hill | <input type="checkbox"/> Rainier Beach |
| <input type="checkbox"/> Central District | <input type="checkbox"/> Ravenna / Laurelhurst |
| <input type="checkbox"/> Columbia City | <input type="checkbox"/> South Lake Union / Eastlake |
| <input type="checkbox"/> Delridge | <input type="checkbox"/> Southeast |
| <input type="checkbox"/> First Hill | <input type="checkbox"/> Southwest |
| <input type="checkbox"/> Georgetown | <input type="checkbox"/> South Park |
| <input type="checkbox"/> Greenwood / Phinney | <input type="checkbox"/> Wallingford / Fremont |

- ☐ International District
- ☐ Interbay
- ☐ North
- ☐ Northeast

- ☐ West Seattle
- ☐ King county (outside Seattle)
- ☐ Outside King County.

If possible, please include any maps or visualizations of historical deployments / use.

If possible, please include any maps or visualizations of historical deployments / use here.

1.4.1 What are the racial demographics of those living in this area or impacted by these issues?

City of Seattle demographics: White - 69.5%; Black or African American - 7.9%; Amer. Indian & Alaska Native - 0.8%; Asian - 13.8%; Native Hawaiian & Pacific Islander - 0.4%; Other race - 2.4%; Two or more races - 5.1%; Hispanic or Latino ethnicity (of any race): 6.6%; Persons of color: 33.7%.

King County demographics: White – 70.1%; Black or African American – 6.7%; American Indian & Alaskan Native – 1.1%; Asian, Native Hawaiian, Pacific Islander – 17.2%; Hispanic or Latino (of any race) – 9.4%

1.4.2 How does the Department to ensure diverse neighborhoods, communities, or individuals are not specifically targeted through the use or deployment of this technology?

GeoTime is used during the investigation of criminal investigations. There is no distinction in the levels of service this system provides to the various and diverse neighborhoods, communities, or individuals within the city.

All use of GeoTime must also comply with SPD Policy 12.050 – Criminal Justice Information Systems and may only be used for legitimate criminal investigative purposes.

Use of GeoTime is be governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

1.5 How do decisions around data sharing have the potential for disparate impact on historically targeted communities? What is the department doing to mitigate those risks?

The Aspen Institute on Community Change defines *structural racism* as “...public policies, institutional practices, cultural representations and other norms [which] work in various, often reinforcing ways to perpetuate racial group inequity.”¹ Data sharing has the potential to be a contributing factor to structural racism and thus creating a disparate impact on historically targeted communities. Data sharing is frequently necessary during the course of a criminal investigation to follow up on leads and gather information on suspects from outside law enforcement agencies. Cooperation between law enforcement agencies is an essential part of the investigative process.

In an effort to mitigate the possibility of disparate impact on historically targeted communities, SPD has established policies regarding the dissemination of data in connection with criminal prosecutions, Washington Public Records Act (Chapter 42.56 RCW), and other authorized researchers.

Further, SPD Policy 5.140 forbids bias-based policing and outlines processes for reporting and documenting any suspected bias-based behavior, as well as accountability measures.

1.6 How do decisions around data storage and retention have the potential for disparate impact on historically targeted communities? What is the department doing to mitigate those risks?

Like decisions around data sharing, data storage and retention have similar potential for disparate impact on historically targeted communities. The information analyzed by GeoTime is related only to criminal investigations and its users are subject to SPD's existing policies prohibiting bias-based policing. Further, SPD Policy 5.140 forbids bias-based policing and outlines processes for reporting and documenting any suspected bias-based behavior, as well as accountability measures.

1.7 What are potential unintended consequences (both negative and positive potential impact)? What proactive steps can you / have you taken to ensure these consequences do not occur.

The most important unintended possible consequence related to the continued utilization of GeoTime is the possibility that erroneous links between individuals not related to criminal investigations may be considered. The information analyzed by GeoTime is related only to criminal investigations and its users are subject to SPD's existing policies prohibiting bias-based policing. The data analyzed using GeoTime is obtained by investigators under during the execution of court ordered warrants.

2.0 Public Outreach

2.1 Scheduled public meeting(s).

Meeting notes, sign-in sheets, all comments received, and questions from the public will be included in Appendix B, D, E, and F. Comment analysis will be summarized in section 3.0 Public Comment Analysis.

Location	Virtual (Webex)
Time	Wednesday, Apr 27, 2022 3:00 pm

Location	Virtual (Webex)
Time	Wednesday, May 18, 2022 3:00 pm

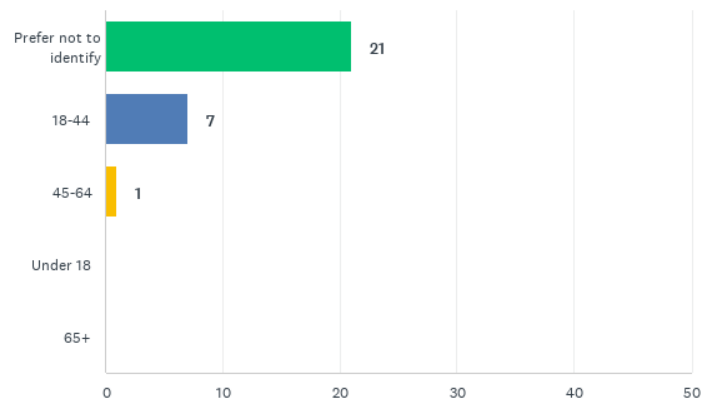
3.0 Public Comment Analysis

Note: 10 comments were received via email. Demographics and analysis was not conducted on these comments but are included in the Appendix containing all public comments.

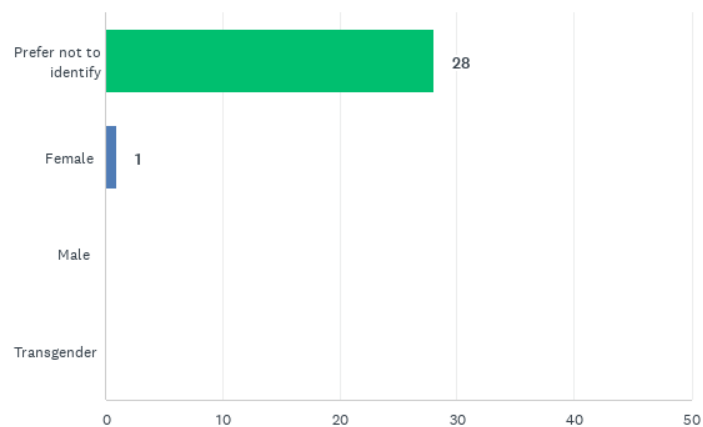
Due to low comment volume on individual technologies, analysis of comments was conducted across the group of technologies.

3.1 Summary of Response Volume

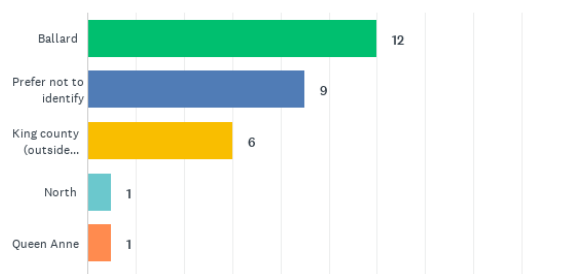
Q7 Which age range are you are currently in?



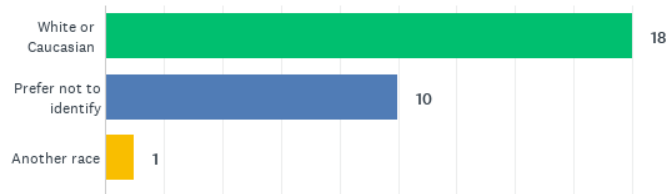
Q8 What gender do you identify as?



Q9 Which neighborhood do you currently reside in?



Q6 Which race(s) / ethnicity (or ethnicities) you identify as.



3.2 Question One: What concerns, if any, do you have about the use of this technology?

Q2 What concerns, if any, do you have about the use of this technology?

personally identifiable information 1st concerns recommendations governmental entities may
 unanswered June 1st Third-party vendors governmental Since questions unanswered
 camera devices public comment unanswered tools used provide informed public extracted
 makes difficult provide deployed well Third-party vendors captured case technologies well
 prohibits SPD using training likely case misuse data shared given sufficient training
 use ROVs place officers given logs policies procedures place say Unless clear policies either
 LGBTQ people unhoused SPD use people color LGBTQ one disproportionately target people
 use cameras typically used disproportionately many cases per
 Surveillance technologies typically information None questions collected due
 ROVs F Nothing prohibits SPD track vehicle needed
 used Even SPD per year use data places device warrants
 cameras services tracking devices digital include
 use GeoTime cases per year EDR data GeoTime technologies typically used
 use tools used disproportionately target recorded target people color
 location tracking devices color LGBTQ people ACCESS people unhoused people
 location data clear policies procedures Consenting procedures place officers seems
 officers given sufficient known sufficient training likely may misuse data likely case technologies
 use tracking devices technologies well Third-party SPD using GeoTime
 answered makes difficult potentially difficult provide informed unclear informed public comment
 Cellebrite comment unanswered questions SIR says questions unanswered June
 digital extractions June 1st concerns vendors governmental entities
 concerns recommendations assume entities may misuse Potentially disproportionate use

3.3 Question Two: What value, if any, do you see in the use of this technology?

Q3 What value, if any, do you see in the use of this technology?

Council adding safeguards misuse data
likelihood City Council
tools anything simply
plus low likelihood
place consider tools
substantial Given plus
sufficient safeguards place
risks quite substantial
enough must sufficient
weighed risks risks
value useful enough
value must weighed
requested think value
information
safeguards public requested
technology
adding safeguards publicused
public requested thinksituations
think value useful
needs weighed possibility
useful enough must
must weighed risks
must sufficient safeguards
risks risks quite
safeguards place consider
quite substantial Given
consider tools anything
Given plus low
anything simply dangerous
low likelihood City value needs weighed
City Council adding

3.4 Question Three: What would you want City leadership to consider when making a decision about the use of this technology?

Q4 What do you want City leadership to consider about the use of this technology?

data collected unhoused people activists consent LGBTQ people unhoused collected
people color LGBTQ publicly contracts govern disproportionately target people
SPD post publicly typically used disproportionately ensure misusing data
Surveillance technologies typically third-party vendors ensure use GeoTime
allow additional uses contain agreements ensure allow livestream
data sharing agreements provides parties appear SIR resulted arrest conviction
sharing third parties monthly transparency report misuse additional sharing
Council require monthly significant risk misuse require SPD update
government agencies significant audit report posted
third-parties vendors government etc resulting audit data shared third-parties
age citizenship-status etc use tracking devices race gender age camera devices
disproportionate based race cameras also assess whether cases per year
audit report also tracking devices require detailed audit
Council prohibit SPD secret surveillance technologies data
permitted use secret device SPD permitted use
City Council require use secret surveillance
Council require SPD Council require detailed
City Council prohibit detailed audit SPD including
report also assess location tracking devices
historically disproportionate based many cases per based race gender
used discriminatory ways gender age citizenship-status audit SPD use
citizenship-status etc resulting GPS data resulting audit report
shared third-parties vendors report posted publicly
vendors government agencies SPD update SIR agencies significant risk
require monthly transparency risk misuse additional transparency report covering
additional sharing third per year use third parties appear may
Review data sharing F sharing agreements ensure investigation
ensure allow additional None questions Audit third-party vendors
technologies typically used vendors ensure misusing used disproportionately target
require SPD post target people color post publicly contracts color LGBTQ people
within SPD network people unhoused people required people activists Based vehicle
use tools

3.5 Question Four: General response to the technology.

Q5 Do you have any other comments or questions?

use improve product audited Federal Monitor software also use Inspector General audits
diagnose problems software audited Office Inspector presumably use diagnose
vendors ensure misusing data example presumably audited third-party vendors SPD states
safeguards place prevent Say purposes technical safeguards Will agreements vendors allow
CDR tools camera devices tech mobile devices fixed location cameras SPD entities
s data obtained vehicle listed 6.1 sharing typically asks etc B extraction
people s data vendor reports published percentage
downloaded investigation file extraction tools data obtained reports
specifically look discriminatory discriminatory uses whether
provided place entities listed consent Report algorithmic audit used
Algorithmic Impact Report many products Legitimate business device
Develop future products data product Develop future SPD
future products Legitimate GeoTime Legitimate business purposes
access Impact Report algorithmic tracking device
restrictions place entities audits specifically look 6.1 sharing data
deployed uses whether people
percentage deployments audited obtained reports published
look discriminatory uses many people access entities listed 6.1
include record process TESU long D server SPD use either whether people s
data collected published percentage deployments extraction device deployment
purposes agreements vendors often business purposes technical SPD s response
technical safeguards place C vendors misusing data investigation file third-party vendors ensure
vendors allow use ensure misusing data example presumably use Office Inspector General
use diagnose problems General audits specifically problems software also Federal Monitor audits
also use improve improve product Develop

4.0 Response to Public Comments

4.1 How will you address the concerns that have been identified by the public?

What program, policy and partnership strategies will you implement? What strategies address immediate impacts? Long-term impacts? What strategies address root causes of inequity listed above? How will you partner with stakeholders for long-term positive change?

5.0 Equity Annual Reporting

5.1 What metrics for this technology be reported to the CTO for the annual equity assessments?

Respond here.

Privacy and Civil Liberties Assessment

Purpose

This section shall be completed after public engagement has concluded and the department has completed the racial equity toolkit section above. The privacy and civil liberties assessment is completed by the community surveillance working group (“working group”), per the surveillance ordinance which states that the working group shall:

“Provide to the executive and the City Council a privacy and civil liberties impact assessment for each SIR that must be included with any departmental request for surveillance technology acquisition or in-use approval. The impact assessment shall include a description of the potential impact of the surveillance technology on civil rights and liberties and potential disparate impacts on communities of color and other marginalized communities. The CTO shall share with the working group a copy of the SIR that shall also be posted during the period of public engagement. At the conclusion of the public engagement period, the CTO shall share the final proposed SIR with the working group at least six weeks prior to submittal of the SIR to Council for approval. The working group shall provide its impact assessment in writing to the executive and the City Council for inclusion in the SIR within six weeks of receiving the final proposed SIR. If the working group does not provide the impact assessment before such time, the working group must ask for a two-week extension of time to City Council in writing. If the working group fails to submit an impact statement within eight weeks of receiving the SIR, the department and City Council may proceed with ordinance approval without the impact statement.”

Working Group Privacy and Civil Liberties Assessment

From: Seattle Community Surveillance Working Group (CSWG)

To: Seattle City Council

Date: August 4, 2022

Re: Privacy and Civil Liberties Impact Assessment for GeoTime

Executive Summary

The CSWG has completed its review of the Surveillance Impact Reports (SIRs) for the six surveillance technologies included in Group 4b of the Seattle Surveillance Ordinance technology review process. These technologies are GeoTime; Computer, Cell Phone, and Mobile Device Extraction Tools; Camera Systems; Remotely Operated Vehicles; Crash Data Retrieval; and Tracking Devices. This document is the CSWG's Privacy and Civil Liberties Impact Assessment for GeoTime used by Seattle Police Department (SPD) as set forth in SMC 14.18.080(B)(1), which we provide for inclusion in the final SIRs submitted to the City Councils.

This document first provides our recommendations to Council, then provides background information, key concerns, and outstanding questions regarding GeoTime.

Our assessment of GeoTime technology as used by Seattle Police Department (SPD) focuses on the following major issues.

1. Inadequate policies defining purpose of use, data collection, assessment, retention, storage, and security.
2. Inadequate policies to assess for errors in data sources and data analysis.
3. Inadequate oversight and auditing policies.
4. No prohibition on predictive policing and social media analysis.

Recommendations

The Council should adopt clear and enforceable rules that ensure, at the minimum, the following:

1. There must be a prohibition on use of GeoTime for predictive policing.
2. There must be a prohibition on use of GeoTime for dragnet social media analysis.
3. The purpose and allowable uses of GeoTime must be clearly defined, and any SPD use of GeoTime must be limited to that specific purpose and those allowable uses. The specific incident types for which GeoTime may be used must be specified.
4. There must be a clear policy allowing only data collected via a court-ordered search warrant to be inputted into GeoTime.
5. SPD must disclose all specific data sources inputted into GeoTime.
6. Use of GeoTime must be disclosed to the individual or the legal representative of the individual facing charges for which GeoTime was used in SPD's investigation.
7. There must be strong access controls (e.g., authentication, authorization, logging) in place for both the GeoTime licensed workstations and for the internet accessible portals, as well as for access to GeoTime outputs and analyses.

8. There must be an analysis of the impacts of any GeoTime outputs.
9. SPD must validate data before inputting it into GeoTime.
10. There must be a process to analyze the accuracy of data and analyses generated by GeoTime.
11. After GeoTime outputs are exported, SPD must be required to delete originally collected, pertinent data from within GeoTime.
12. SPD must disclose/log to whom and under what circumstances GeoTime data inputs and outputs are shared.
13. Any data inputs or outputs must be securely shared with third parties and properly deleted.
14. There must be adequate training for all personnel who use GeoTime and the training must include a privacy component specific to the risks inherent to using GeoTime as an investigative tool.
15. There must be a detailed direct audit log of user actions within GeoTime.
16. SPD must produce a publicly available audit report about its use of GeoTime on at least an annual basis.
17. Any data inputs hosted by Uncharted Software or data outputs created by GeoTime are not owned, used, or retained by Uncharted Software, and any data inputs and data outputs are properly stored.
18. SPD must disclose for how many incidents per year they use GeoTime.
19. SPD must be prohibited from signing a non-disclosure agreement with Uncharted Software.

Key Concerns

1. **Inadequate Policies Defining Purpose of Use and Usage Limits.** The SIR does not fully explain use cases for GeoTime and does not include policies placing limits on its uses. There is no policy prohibiting the use of GeoTime for predictive policing, there does not seem to be policies governing limits on the kinds of data sources that can be manually added to GeoTime, and it is unclear if there are limits to the types of events or crimes that SPD will investigate via GeoTime. At the 4/27/22 public engagement meeting, the SPD representative indicated that there is no policy governing the incident types for which SPD may use GeoTime but claimed that “SPD doesn’t have time to apply” GeoTime to “lower-level offenses”. This implies that with more time and resources, SPD would use GeoTime to investigate more offenses, even minor ones.
2. **Potential for Predictive Usages.** The SIR states that “GeoTime is used to aid in the investigation of crime by helping detectives analyze location information over time and present patterns in the data.” GeoTime’s pattern analysis functions could be used to anticipate future crimes. Predictive policing is often referred to as “crime forecasting.” Predictive policing uses computer systems to analyze large sets of data, such as historical crime data, to predict or forecast where and when the next crime or series of crimes will take place. This is a mode of policing rife with bias and inaccuracies that reproduces and compounds existing discrimination.
3. **No Policies Restricting Use of GeoTime’s Additional Surveillance Features.** The SIR does not provide sufficient information about what components of GeoTime SPD uses and does not use. While an SPD representative stated during the 4/27/22 public engagement meeting that SPD does not use GeoTime’s Social Media Analysis functionality, there does not seem to be any policy prohibiting use of this feature.
4. **Lack of Clarity and Transparency on What Other Technologies GeoTime Interfaces With.** The SIR does not specify what other technology, if any, GeoTime interfaces with. Without this information, it is difficult to adequately assess the privacy risks that GeoTime poses.
5. **Lack of Clarity and Transparency on How Often GeoTime is Deployed and How the Decision to Deploy GeoTime is Made.** While the SIR states that “GeoTime is utilized frequently by investigators during the investigation of crimes,” at the public engagement meeting on 4/27/22,

the SPD representative stated that SPD “rarely” used GeoTime. At the 5/18/22 public engagement meeting, the SPD representative stated that GeoTime is used 1-2 times a week by one detective. It remains unclear how often GeoTime is deployed, and who determines in which cases GeoTime is used, and how that determination is made.

- 6. Lack of Transparency and Inadequate Policies on Data Storage, Safeguards, and Retention.** There is no information in the SIR on where the maps and other visualizations generated by GeoTime are stored. It is also unclear for how long those data are stored, what safeguards exist to protect that data, and what retention policies exist.
- 7. Lack of Transparency Around Data Sources.** The SIR does not provide a comprehensive list of data sources that GeoTime aggregates and analyzes. In various places, the SIR refers to “geodata, such as latitude and longitude,” “location information,” “cell records,” “cell site locations,” “criminal information,” “data from cellular providers and data extracted from mobile devices,” and “Personally Identifiable Information”.
- 8. Lack of Clarity on How SPD Obtains the Data it Inputs into GeoTime.** It is unclear if private information obtained without a warrant is ever added to GeoTime and what public data are added to GeoTime. The SIR states: “The data analyzed using GeoTime is obtained by investigators under execution of court ordered warrants, including data from cellular providers and from data extracted from mobile device.” This contradicts the information in the Computer, Cellphone, & Mobile Device Extraction Tools SIR, which states that search warrants are not the only means through which data are obtained. It is also unclear what public information is added to GeoTime and how it is obtained.
- 9. Inadequate Policies to Assess for Errors in the Data Sources and Data Analysis.** The SIR does not answer the question of how GeoTime checks the accuracy of the information collected that is put into GeoTime. It also does not address what measures SPD takes to validate the accuracy of the GeoTime data output and analysis. GeoTime is a powerful technology that purports to help investigators, among other things, “dispute an alibi or demonstrate criminal intent”. Appendix E of the amended SIR states that “the investigation itself is the validation... The accuracy of the input there is independently identified by the investigator through the process of investigation”. It is still unclear if all information is assessed for errors before it is inputted into GeoTime and if and how SPD assesses GeoTime’s outputs for errors. Without validation of its analyses, use of GeoTime could have harmful impacts on the lives of the people whose data are being analyzed, including implicating the wrong person in a crime.
- 10. Inadequate Information on How SPD Accesses GeoTime and What Access Controls are in Place for GeoTime.** It is unclear from the SIR: (1) what software-level security controls (e.g., authentication, authorization, logging) are in place for both the GeoTime workstations and for the portal; (2) whether they are the same access control mechanisms for both the portal and the workstations; and (3) where the internet accessible portal can be accessed from.
- 11. Inadequate Information on Which and How Many SPD Personnel/Units Have Access to GeoTime and its Outputs.** There is a large discrepancy between the number of licenses for the internet portal (7 GeoTime Glimpse licenses) and the number of people who purportedly have access (3). In one part of the SIR, it states “Only trained, backgrounded, and CJIS certified SPD detectives have access to GeoTime.” In a different section, it states that log-in credentials “are granted to employees with business needs to access GeoTime” without any elaboration on which employees and the definition of “business needs.” At the 5/18/22 public engagement meeting, and SPD representative stated that three detectives have access to GeoTime, and one of those three uses it regularly. However it is unclear whether those are the only individuals in SPD who have access to GeoTime via both the licensed workstations and the internet portal. Additionally, the SIR does not state which and how many SPD employees have access to GeoTime’s outputs.

12. Inadequate Oversight and Auditing Policies. The SIR states the entities authorized for audits, but it does not address whether there are audits in place and what those are (e.g., self-audits, third-party audits, or review). It does not address whether GeoTime has an audit log, what that log contains if an audit log exists, and whether that log is sufficient to conduct and audit. At the 5/18/22 public engagement meeting, when asked about the last time an audit was conducted on SPD's use of GeoTime, the SPD representative referred the questioner to the OIG, which indicates that no audit has been conducted by the OIG or any other entity, including APRS and the federal monitor. Without detailed auditing capabilities, or regular auditing, it is not possible to have sufficient oversight into how SPD uses GeoTime.

13. Inadequate Data Sharing Policies. The SIR only provides a vague description of who might receive GeoTime data and analyses and how such data would be shared. The SIR does not describe security protocols for transferring data or for ensuring that shared data are properly deleted. Indefinite retention of data and insecure sharing processes could lead to exposure of sensitive data, with harmful consequences for those whose data are inputted into GeoTime.

Outstanding Questions

1. Which GeoTime functionalities does SPD use?
2. Which SPD units have access to GeoTime?
3. How many SPD employees have direct access to GeoTime, both via GeoTime Glimpse (internet portal) and GeoTime Desktop (workstations)?
4. How many SPD workstations have GeoTime installed on them?
5. Which SPD units have access to the files (e.g., maps and other visuals) generated by GeoTime? How many SPD personnel have access to those files? What other agencies or groups outside of SPD that have access to GeoTime files?
6. What other technology does GeoTime interface with?
7. What are all the data sources that SPD inputs into GeoTime?
8. Can data manually input into GeoTime be obtained without a warrant and based on two-party consent alone? If so, under what circumstances may the data be obtained without a warrant and what rules set the parameters for GeoTime's use?
9. How often is GeoTime deployed? How many times/for how many investigations a week is it deployed?
10. Who determines whether GeoTime should be deployed?
11. What is the criteria for deployment? Can any detective determine based on their own discretion that deployment of GeoTime is necessary for their investigation? Is supervisor approval required?
12. What software-level security controls are in place for both the GeoTime workstations and for the internet accessible portal? Are they the same access control mechanisms? Where can the internet accessible portal be accessed from (i.e., a mobile device)?
13. Where does SPD store/host the data it manually inputs into GeoTime? Is there a difference in where the data are hosted or stored when GeoTime is accessed via the portal vs. via a workstation?
14. How long are the data stored there? When are the data deleted?
15. What safeguards are in place to protect the data that is inputted into GeoTime (is the data encrypted? What are the access control mechanisms?)
16. How does SPD validate the accuracy of the data it manually inputs into GeoTime, as well as GeoTime data outputs/analyses?
17. Which SPD personnel have access to the data output/files generated from GeoTime? How many SPD personnel have access to the GeoTime data outputs?

18. What is the nature of the training that SPD personnel receive on GeoTime? How many hours of training do they receive? What does the training cover? Do they receive periodic updated training? Are they provided privacy training specific to the privacy risks associated with GeoTime?
19. Does GeoTime have an audit log? If so, what does it contain/what information does it collect? Does it log what actions each user takes inside the application?
20. How often is SPD's GeoTime subject to an audit? When was the last audit of SPD's GeoTime conducted and by which entity (APRS, OIG, or the federal monitor)? Where are the audit reports located?
21. Does SPD maintain a record of all disclosures of GeoTime data and analyses/output, including those to outside entities?

The answers to these questions can further inform the content of any binding policy the Council chooses to include in an ordinance on this technology, as recommended above.

Memo

To: Seattle City Council
From: Jim Loter, Interim Chief Technology Officer
Subject: CTO Response to the Surveillance Working Group GeoTime SIR Review

Purpose

As provided in the Surveillance Ordinance, [SMC 14.18.080](#), this memo outlines the Chief Technology Officer's (CTO's) response to the Surveillance Working Group assessment on the Surveillance Impact Report for Seattle Police Department's GeoTime.

Background

The Information Technology Department (ITD) is dedicated to the Privacy Principles and Surveillance Ordinance objectives to provide oversight and transparency about the use and acquisition of specialized technologies with potential privacy and civil liberties impacts. All City departments have a shared mission to protect lives and property while balancing technology use and data collection with negative impacts to individuals. This requires ensuring the appropriate use of privacy invasive technologies through technology limitations, policy, training and departmental oversight.

The CTO's role in the SIR process has been to ensure that all City departments are compliant with the Surveillance Ordinance requirements. As part of the review work for surveillance technologies, ITD's Privacy Office has facilitated the creation of the Surveillance Impact Report documentation, including collecting comments and suggestions from the Working Group and members of the public about these technologies. IT and City departments have also worked collaboratively with the Working Group to answer additional questions that came up during their review process.

Technology Purpose

The Seattle Police Department (SPD) utilizes GeoTime in a handful of ways to obtain information during a criminal investigation. GeoTime is geospatial analysis software that allows the visual analysis of events over time. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

Working Group Concerns

In their review, the Working Group has raised concerns about these devices being used in a privacy impacting way, including data collection, sharing, retention, deletion, storage, and protection. We believe that policy, training and technology limitations enacted by SPD provide adequate mitigation for the potential privacy and civil liberties concerns raised by the Working Group about the use of this operational technology.

Recommended Next Steps

I look forward to working together with Council and City departments to ensure continued transparency about the use of these technologies and finding a mutually agreeable means to use technology to improve City services while protecting the privacy and civil rights of the residents we serve. Specific concerns in the Working Group comments about this technology are addressed in the attached document.

Response to Specific Concerns: GeoTime

Concern: Inadequate Policies Defining Purpose of Use and Usage Limits

CTO Assessment: The SIR outlines the conditions under which GeoTime is used in investigations in. Data obtained from this software is handled in accordance with SPD's evidence handling policies as well as state and federal law. The passage of the ordinance codifies the purpose and authorized usages of this technology.

SIR Response:

Section 1.1

GeoTime is geospatial analysis software that allows the visual analysis of events over time. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

Section 3.1

GeoTime is only used during the investigation of crimes by SPD detectives. Access for personnel into the system is predicated on state and federal law governing access to Criminal Justice Information Services (CJIS). This includes pre-access background information, appropriate role-based permissions as governed by the CJIS security policy, and audit of access and transaction logs within the system. All users of GeoTime must be CJIS certified and maintain Washington State ACCESS certification.

Section 3.2

GeoTime is only used during the investigation of crimes by the SPD.

All use of GeoTime must also comply with SPD Policy 12.050 – Criminal Justice Information Systems and may only be used for legitimate criminal investigative purposes.

Use of GeoTime is governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

The data analyzed using GeoTime is obtained by investigators under the execution of court ordered warrants, including data from cellular providers and from data extracted from mobile devices (see SIR-Computer, Cellphone, & Mobile Device Extraction Tools).

Section 4.3

GeoTime is only used during the investigation of crimes by SPD detectives.

Concern: Potential for Predictive Usages

CTO Assessment: The SIR outlines the conditions under which GeoTime is used in investigations. Data obtained from this software is handled in accordance with SPD's evidence handling policies as well as state and federal law. The passage of the ordinance codifies the purpose and authorized usages of this technology.

Concern: No Policies Restricting Use of GeoTime's Additional Surveillance Features

CTO Assessment: The SIR outlines the conditions under which GeoTime is used in investigations in. Data obtained from this software is handled in accordance with SPD's evidence handling policies as well as state and federal law. The passage of the ordinance codifies the purpose and authorized usages of this technology.

SIR Response:

Section 1.1

GeoTime is geospatial analysis software that allows the visual analysis of events over time. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

Section 3.1

GeoTime is only used during the investigation of crimes by SPD detectives. Access for personnel into the system is predicated on state and federal law governing access to Criminal Justice Information Services (CJIS). This includes pre-access background information, appropriate role-based permissions as governed by the CJIS security policy, and audit of access and transaction logs within the system. All users of GeoTime must be CJIS certified and maintain Washington State ACCESS certification.

Section 3.2

GeoTime is only used during the investigation of crimes by the SPD.

All use of GeoTime must also comply with SPD Policy 12.050 – Criminal Justice Information Systems and may only be used for legitimate criminal investigative purposes.

Use of GeoTime is governed by the City of Seattle Intelligence Ordinance, 28 CFR Part 23, CJIS requirements, and any future applicable requirements.

The data analyzed using GeoTime is obtained by investigators under the execution of court ordered warrants, including data from cellular providers and from data extracted from mobile devices (see SIR-Computer, Cellphone, & Mobile Device Extraction Tools).

Section 4.3

GeoTime is only used during the investigation of crimes by SPD detectives.

Concern: Lack of Clarity and Transparency on What Other Technologies GeoTime Interfaces With

CTO Assessment: No entities outside of SPD have direct access to the data. Only evidence related to the investigation would be shared with identified partners in the SIR. Data sharing is a legal requirement for assisting with criminal prosecutions or complying with legal requirements with other law enforcement agencies.

SIR Response:

Section 4.1

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

Concern: Lack of Clarity and Transparency on How Often GeoTime is Deployed and How the Decision to Deploy GeoTime is Made

CTO Assessment: The number of cases of which an GeoTime is used is not a question represented in the SIR but may be part of the OIG's audit of GeoTime through the surveillance process.

SIR Response:

Section 4.3

GeoTime is only used during the investigation of crimes by SPD detectives.

Concern: Lack of Transparency and Inadequate Policies on Data Storage, Safeguards, and Retention

CTO Assessment: Information gathered from GeoTime would be contained in an investigative file and would be governed as evidence, which is stored securely in line with SPD policy, CJIS Security Policy, and other state and federal regulations relating to handling of law enforcement data.

SIR Response:

Section 4.9

Data is only accessed as part of ongoing criminal investigations or under the City of Seattle Intelligence Ordinance.

Section 4.10

Only authorized SPD users can access the system, technology, or the data. Access to the application is limited to SPD personnel via password-protected login credentials.

Data is securely input and used on SPD's password-protected network with access limited to authorized users.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

SPD's Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. The Office of Inspector General and the federal monitor can also access all data and audit for compliance at any time.

Section 5.1

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

Section 5.4

Unit supervisors are responsible for ensuring compliance with data retention requirements within SPD. Audit, Policy & Research Section personnel can also conduct audits of all data collection software and systems. Additionally, any appropriate auditor, including the Office of Inspector General and the federal monitor can audit for compliance at any time.

Concern: Lack of Transparency Around Data Sources

CTO Assessment: The sourcing or availability of information GeoTime is used is not a question represented in the SIR but may be part of the OIG's audit of GeoTime through the surveillance process.

SIR Response:

Section 4.1

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

Concern: Lack of Clarity on How SPD Obtains the Data it Inputs into GeoTime

CTO Assessment: The sourcing or availability of information GeoTime is used is not a question represented in the SIR but may be part of the OIG's audit of GeoTime through the surveillance process.

SIR Response: N/A

Concern: Inadequate Policies to Assess for Errors in the Data Sources and Data Analysis

CTO Assessment: The ability for errors in sources outside of the technology of GeoTime is not a question represented in the SIR but may be part of the OIG's audit of GeoTime through the surveillance process.

SIR Response:

Section 6.6

Individuals may request records pursuant to the PRA, and individuals have the right to inspect criminal history record information maintained by the department ([RCW 10.97.030](#), [SPD Policy 12.050](#)).

Individuals can access their own information by submitting a public disclosure request.

Concern: Inadequate Information on How SPD Accesses GeoTime and What Access Controls are in Place for GeoTime

CTO Assessment: As stated in the SIR, access to GeoTime requires authenticated access to SPD personnel with a business need to access GeoTime. These employees are CJIS certified to handle sensitive criminal justice information. Access and storage for information contained within GeoTime is also governed by the CJIS Security Policy.

SIR Response:

Section 4.7

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

The files created with GeoTime are stored within investigation files for the case.

Access to GeoTime requires SPD personnel to log in with password-protected login credentials which are granted to employees with business needs to access GeoTime. These employees are ACCESS and CJIS certified.

According to the CJIS security policy, “The agency shall configure the application, service, or information system to provide only essential capabilities and shall specifically prohibit and/or restrict the use of specified functions, ports, protocols, and/or services.”.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

Section 4.9

Data is only accessed as part of ongoing criminal investigations or under the City of Seattle Intelligence Ordinance.

Section 4.10

Only authorized SPD users can access the system, technology, or the data. Access to the application is limited to SPD personnel via password-protected login credentials.

Data is securely input and used on SPD’s password-protected network with access limited to authorized users.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

SPD’s Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. The Office of Inspector General and the federal monitor can also access all data and audit for compliance at any time.

Concern: Inadequate Information on Which and How Many SPD Personnel/Units Have Access to GeoTime and its Outputs

CTO Assessment: As stated in the SIR, only authorized SPD users can access the system, technology, or the data. Access to the application is limited to SPD personnel via password-protected login credentials.

SIR Response:

Section 4.7

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

The files created with GeoTime are stored within investigation files for the case.

Access to GeoTime requires SPD personnel to log in with password-protected login credentials which are granted to employees with business needs to access GeoTime. These employees are ACCESS and CJIS certified.

According to the CJIS security policy, “The agency shall configure the application, service, or information system to provide only essential capabilities and shall specifically prohibit and/or restrict the use of specified functions, ports, protocols, and/or services.”.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

Section 4.9

Data is only accessed as part of ongoing criminal investigations or under the City of Seattle Intelligence Ordinance.

Section 4.10

Only authorized SPD users can access the system, technology, or the data. Access to the application is limited to SPD personnel via password-protected login credentials.

Data is securely input and used on SPD’s password-protected network with access limited to authorized users.

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

SPD’s Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. The Office of Inspector General and the federal monitor can also access all data and audit for compliance at any time.

Concern: Inadequate Oversight and Auditing Policies

CTO Assessment: SPD has existing audit functionality with the Office of Inspector General, unit supervisors, or the federal monitor. Audit, Policy & Research Section personnel can also conduct audits of all data collection software and systems. Additionally, the Surveillance Ordinance does mandate yearly auditing of these technologies by the Office of Inspector General and the IT department in some circumstances.

SIR Response:

Section 8.1

The information analyzed by the GeoTime software relates to ongoing criminal investigations. Information will be released in response to public disclosure requests as applicable under the Public Records Act and the City of Seattle Intelligence Ordinance, just as they are applicable to any other SPD investigative records.

Per SPD Policy 12.080, requests for public disclosure are logged by SPD's Legal Unit. Any action taken, and data released subsequently in response to subpoenas is then tracked through a log maintained by the Legal Unit. Public disclosure requests are tracked through the City's GovQA Public Records Response System, and responses to Public Disclosure Requests, including responsive records provided to a requestor, are retained by SPD for two years after the request is completed.

Section 8.2

SPD's Audit, Policy and Research Section is authorized to conduct audits of all investigative data collection software and systems. In addition, the Office of Inspector General and the federal monitor can conduct audits of the software, and its use, at any time. Audit data is available to the public via Public Records Request.

Concern: Inadequate Data Sharing Policies

CTO Assessment: No entities outside of SPD have direct access to the data. Only evidence related to the investigation would be shared with identified partners in the SIR. Data sharing is a legal requirement for assisting with criminal prosecutions or complying with legal requirements with other law enforcement agencies.

SIR Response:

Section 6.1

No person, outside of SPD, has direct access to GeoTime.

Data analyzed by GeoTime may be shared outside SPD with the other agencies, entities, or individuals within legal guidelines or as required by law.

Data may be shared with outside entities in connection with criminal prosecutions:

- Seattle City Attorney's Office
- King County Prosecuting Attorney's Office
- King County Department of Public Defense
- Private Defense Attorneys
- Seattle Municipal Court
- King County Superior Court
- Similar entities where prosecution is in Federal or other State jurisdictions

Data may be made available to requesters pursuant to the Washington Public Records Act, Chapter 42.56 RCW ("PRA"). SPD will apply applicable exemptions to the data before disclosing to a requester. Individuals have the right to inspect criminal history record information maintained by the department (RCW 10.97.030, SPD Policy 12.050). Individuals can access their own information by submitting a public disclosure request.

Per SPD Policy 12.080, the Crime Records Unit is responsible for receiving, recording, and responding to requests “for General Offense Reports from other City departments and from other law enforcement agencies, as well as from insurance companies.”

Discrete pieces of data analyzed by GeoTime may be shared with other law enforcement agencies in wanted bulletins, and in connection with law enforcement investigations jointly conducted with those agencies, or in response to requests from law enforcement agencies investigating criminal activity as governed by SPD Policy 12.050 and 12.110. All requests for data from Federal Immigration and Customs Enforcement (ICE) authorities are referred to the Mayor’s Office Legal Counsel in accordance with the Mayoral Directive, dated February 6, 2018.

SPD shares data with authorized researchers pursuant to properly execute research and confidentiality agreements as provide by SPD Policy 12.055. This sharing may include discrete pieces of data related to specific investigative files analyzed by this application.

Section 6.2

Data sharing is frequently necessary during the course of a criminal investigation to follow up on leads and gather information on suspects from outside law enforcement agencies. Cooperation between law enforcement agencies is an essential part of the investigative process. For example, an investigator may send out a photo or description of a homicide suspect in order to find out if another LE agency knows their identity.

Products developed using this information may be shared with other law enforcement agencies. All products created with the information used in this project will be classified as Law Enforcement Sensitive. Any bulletins will be marked with the following restrictions: LAW ENFORCEMENT SENSITIVE — DO NOT LEAVE PRINTED COPIES UNATTENDED — DISPOSE OF IN SHREDDER ONLY — NOT FOR PUBLIC DISPLAY OR DISTRIBUTION — DO NOT FORWARD OR COPY.

Appendix A: Glossary

Accountable: (taken from the racial equity toolkit.) Responsive to the needs and concerns of those most impacted by the issues you are working on, particularly to communities of color and those historically underrepresented in the civic process.

Community outcomes: (taken from the racial equity toolkit.) The specific result you are seeking to achieve that advances racial equity.

Contracting equity: (taken from the racial equity toolkit.) Efforts to achieve equitable racial outcomes in the way the City spends resources, including goods and services, consultants and contracting.

DON: “department of neighborhoods.”

Immigrant and refugee access to services: (taken from the racial equity toolkit.) Government services and resources are easily available and understandable to all Seattle residents, including non-native English speakers. Full and active participation of immigrant and refugee communities exists in Seattle’s civic, economic and cultural life.

Inclusive outreach and public engagement: (taken from the racial equity toolkit.) Processes inclusive of people of diverse races, cultures, gender identities, sexual orientations and socio-economic status. Access to information, resources and civic processes so community members can effectively engage in the design and delivery of public services.

Individual racism: (taken from the racial equity toolkit.) Pre-judgment, bias, stereotypes about an individual or group based on race. The impacts of racism on individuals including white people internalizing privilege, and people of color internalizing oppression.

Institutional racism: (taken from the racial equity toolkit.) Organizational programs, policies or procedures that work to the benefit of white people and to the detriment of people of color, usually unintentionally or inadvertently.

OCR: “Office of Civil Rights.”

Opportunity areas: (taken from the racial equity toolkit.) One of seven issue areas the City of Seattle is working on in partnership with the community to eliminate racial disparities and create racial equity. They include: education, health, community development, criminal justice, jobs, housing, and the environment.

Racial equity: (taken from the racial equity toolkit.) When social, economic and political opportunities are not predicted based upon a person’s race.

Racial inequity: (taken from the racial equity toolkit.) When a person's race can predict their social, economic, and political opportunities and outcomes.

RET: "racial equity toolkit"

Seattle neighborhoods: (taken from the racial equity toolkit neighborhood.) Boundaries defined for the purpose of understanding geographic areas in Seattle.

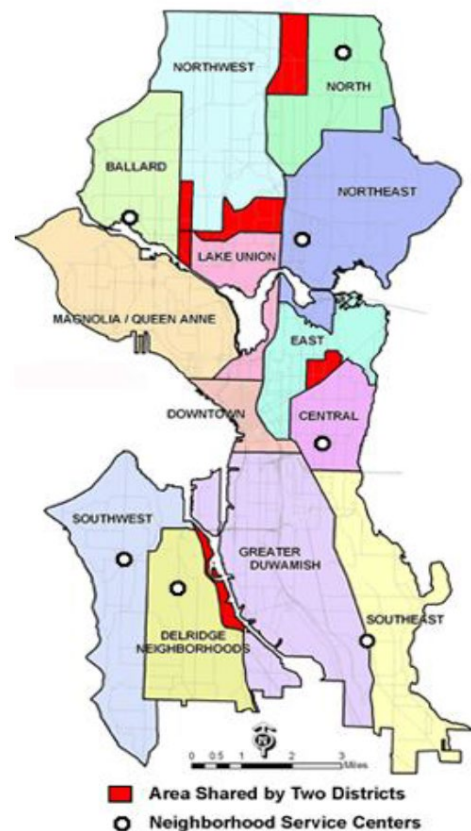
Stakeholders: (taken from the racial equity toolkit.) Those impacted by proposed policy, program, or budget issue who have potential concerns or issue expertise. Examples might include: specific racial/ethnic groups, other institutions like Seattle housing authority, schools, community-based organizations, change teams, City employees, unions, etc.

Structural racism: (taken from the racial equity toolkit.) The interplay of policies, practices and programs of multiple institutions which leads to adverse outcomes and conditions for communities of color compared to white communities that occurs within the context of racialized historical and cultural conditions.

Surveillance ordinance: Seattle City Council passed ordinance [125376](#), also referred to as the "surveillance ordinance."

SIR: "surveillance impact report", a document which captures the fulfillment of the Council-defined surveillance technology review process, as required by ordinance [125376](#).

Workforce equity: (taken from the racial equity toolkit.) Ensure the City's workforce diversity reflects the diversity of Seattle.



Appendix B: Meeting Notice(s)



Tech Talk

Seattle Information Technology

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City's Surveillance Ordinance Virtual Event Wednesday, April 27, 3-4:30 p.m.

by [Seattle IT](#) on April 25, 2022

The City will host the first of two virtual presentations related to the City's Surveillance Ordinance this Wednesday, April 27 at 3 p.m. The virtual event facilitates the public comment period and will allow attendees to engage with the technology experts and hear from City leadership. These virtual events will take place using Webex and participants can join via online or by phone. Links and times for the event dates below can be found on the events calendar on the [City's Surveillance Technologies website](#).

For more information on the public comment period read [last week's blog post](#) on *TechTalk*.

The next public virtual event will be on May 18. More information on these technologies, as well as the City of Seattle's Privacy program, can be found online at the [City of Seattle's Privacy website](#).

Filed Under: [Privacy](#)

Tagged With: [Surveillance](#), [Surveillance technology](#)



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Public Comment Period Opening for Technologies Subject to the City's Surveillance Ordinance

by [Seattle IT](#) on April 18, 2022

The City of Seattle has published the fifth set of draft Surveillance Impact Reports (SIRs) for six of the 26 currently existing surveillance technologies, [per the Surveillance Ordinance](#).

The City of Seattle is looking for the public's input on the SIRs to provide the City Council with community perspective and ensure the City's policies responsibly govern the use of these technologies.

The public comment period is currently open and runs through May 20, 2022. There are three ways for residents to provide input and share their concerns:

1. Residents can submit their surveillance comments on each technology online at: [City of Seattle Privacy website](#).
2. Seattle residents can also mail comments to Attn: Surveillance & Privacy Program, Seattle IT, PO Box 94709, Seattle, WA 98124
3. City Surveillance Technology Events: The City will hold virtual events to allow attendees to engage with the technology experts and hear from City leadership. These virtual events will take place using Webex and participants can join via online or by phone. Links and times for the event dates below can be found on the events calendar on the [City's Surveillance Technologies website](#). Scheduled event dates are:

Date and time:

Wednesday, Apr 27, 2022 3:00 pm

Wednesday, May 18, 2022 3:00 pm

Webinar topic:

Group 4b Surveillance Public Meeting

Next Date and time: **Wednesday, May 18, 2022 3:00 pm**

Join link: <https://seattle.webex.com/seattle/j.php?MTID=m549182a7ee153d68cc332b28fe94e311>

Webinar number:

2497 635 9688

Webinar password:

D6JhTcf5KU7 (36548235 from phones)

Join by phone

+1-206-207-1700 United States Toll (Seattle)

+1-408-418-9388 United States Toll

Access code: 248 062 39194

Appendix D: Letters from Organizations or Commissions

June 2, 2022

Seattle Information Technology
700 5th Ave, Suite 2700
Seattle, WA 98104

RE: ACLU of Washington Comments on Group 4b Surveillance
Technologies



P.O. Box 2728
Seattle, WA 98111-2728
(206) 624-2184
aclu-wa.org

Michele Storms
Executive Director

On behalf of the ACLU of Washington, we write to offer our comments on the surveillance technologies included in Group 4b of the Seattle Surveillance Ordinance implementation process.

The six Seattle Police Department (SPD) technologies in Group 4b are covered in the following order:

1. GeoTime
2. Mobile Device Extraction Tools
3. Camera Systems
4. Remotely Operated Vehicles
5. Crash Data Retrieval Tool
6. Tracking Devices

These comments should be considered preliminary, given that the Surveillance Impact Reports (SIR) for each technology leave a number of important questions unanswered. Specific unanswered questions for each technology are noted in the comments relating to that technology. Answers to these questions should be included in the updated SIRs provided to the Community Surveillance Working Group and to the City Council prior to their review of the technologies.

GeoTime

I. *Background*

GeoTime is a geospatial analysis software that visually maps data over space and time. It raises serious privacy and civil liberties concerns. These concerns are three-fold. First, GeoTime's data aggregation and analysis features are incredibly invasive. They enable law enforcement to gather and

create correlations between large amounts¹ of personal data from numerous sources at a time, including call detail records, mobile forensic data, GPS, location-tracking data, and social media data, creating very detailed, personalized maps of people's lives.²

Secondly, GeoTime's capabilities are excessively broad and intrusive. It creates links between people and reveals "patterns of behavior and relationships between seemingly unconnected events and entities,"³ producing a dragnet that potentially captures the private data of those not involved in the crime or event being investigated. It may therefore implicate innocent individuals in a crime.

Lastly, and relatedly, GeoTime may be used to surveil and ultimately chill constitutionally protected activities concerning religion, expression, and assembly. For example, GeoTime advertises a "Trip Counter" feature, which enables users to "find new locations of interest [e.g. a mosque, an abortion clinic, or the site of an anti-police violence rally] and get quick answers. Who visited? How many times? When was each visit?"⁴

SPD has access to a potentially wide variety of undisclosed GeoTime products with various surveillance functionalities. GeoTime is owned by UnCharted Software, which sells a number of GeoTime products with various surveillance functionalities. The SIR does not disclose which GeoTime products SPD owns. At the 5/18/22 public engagement meeting with SPD, following up from a question asked at the first public engagement meeting on 4/18/22, the SPD representative stated that SPD owns two GeoTime Desktop licenses on computers secured in the Intel Unit and seven GeoTime Glimpse licenses that allow web access to the portal.⁵ According to the SPD representative, three detectives have access to GeoTime and there is one detective who accesses it regularly.⁶

Though the SIR does not disclose GeoTime Desktop's functionalities or how they work,⁷ there is evidence that SPD can use GeoTime to analyze

¹ On its website, GeoTime advertises that its "Enterprise" product can "handle millions of records at once." "GeoTime Enterprise," *GeoTime*, Accessed May 12, 2022, <http://www.geotime.com/enterprise>.

² The GeoTime website advertises that its "Desktop" product can "layer datasets to provide a comprehensive picture of activity." See "GeoTime Enterprise."

³ "GeoTime for Analysis of Behavior in Time and Geography," *Oculus Info Inc.*, 2011, Accessed May 12, 2022, https://www.unchartedsoftware/assets/GeoTime_Overview.pdf.

⁴ "GeoTime Desktop," *GeoTime*, Accessed May 12, 2022, <https://www.geotime.com/desktop>.

⁵ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2," Accessed June 1, 2022, <https://www.seattle.gov/event-calendar?trumbaEmbed=view%3Devent%26eventid%3D159435131>

⁶ *Ibid.*

⁷ Seattle Police Department, "2022 Surveillance Impact Report: GeoTime," Accessed May 12, 2022,

social media data. At the 5/18/2022 public engagement meeting, the SPD representative, following up from a question at the first public engagement meeting, stated that SPD does not use the social media analysis functionality of GeoTime.⁸ However, it remains unclear which of the remaining functionalities SPD does use. It should be noted that although SPD states they do not use the social media analysis functionality, it is unclear whether they can still input social media data into GeoTime in order to gain insights via the other functionalities such as the mobile device forensic analysis functionality. This functionality ostensibly analyzes data extracted from people's phones, which SPD has the capability to do with their mobile device extraction tools.⁹ This strongly suggests that even without the social media analysis functionality, analysis of social media data is nevertheless something SPD can capably do with GeoTime, given that 99% of people access their social media from their mobile phone.¹⁰ It is noteworthy that GeoTime Desktop can import data from Cellebrite,¹¹ one of the mobile device extraction tools that public records show SPD owns or has owned in the past.¹²

In general, SPD provides a very general and vague explanation of GeoTime's capabilities in the SIR that does not meaningfully convey the vast number of sources of personal and private data that SPD can aggregate and analyze within GeoTime, and the kinds of outputs it generates. The GPS analysis functionality alone, for example, can use the following data sources: automated license plate readers, transit pass, automated toll pass, crime incident data, witness/informant statements, in-vehicle GPS system, Google location history, Uber/Lyft location reports, and on-board vehicle data (e.g., odometer, speed, location logs, saved locations/routes, connected devices/media, call logs), among others.¹³

Despite how powerful this tool is, the SIR does not indicate use cases for GeoTime, or define limitations on the kinds of data sources that SPD can input. There is also a lack of clarity on the oversight measures in place, such as whether GeoTime has audit logs and what data those logs might collect. When asked at the 5/18/22 public engagement meeting about the last time

<https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20%20Geotime.pdf>

⁸ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

⁹ Seattle Police Department, "2022 Surveillance Impact Report: Computer, Cellphone, & Mobile Device Extraction Tool," Accessed June 1, 2022,

<https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20Computer%2C%20Cellphone%2C%20%26%20Mobile%20Device%20Extraction%20Tools.pdf>

¹⁰ Dean, Brian, *BackLinko*, "Social Network Usage & Growth Statistics: How Many People Use Social Media in 2022?", 2021, <https://backlinko.com/social-media-users>.

¹¹ "GeoTime Desktop."

¹² On file with the author.

¹³ Khamisa, Adeel, "GeoTime: GPS Data Analysis – Tips and Best Practices," *GeoTimeInfo*, October 10, 2021, <https://www.youtube.com/watch?v=oOUKjwDKCVo>.

an audit was conducted, the SPD representative referred the question-asker to the Office of Inspector General (OIG), which strongly suggests that no audit has been done by OIG, and certainly no audit conducted by SPD's Audit, Policy, and Research Section (APRS—SPD's auditing body) or the federal monitor.¹⁴ Moreover, the SIR does not indicate there are any validation measures for the data inputs, or outputs such as images, animated videos, or PowerPoint files of mapped data. When asked at the 5/18/22 public engagement meeting whether there are measures in place to verify the accuracy of GeoTime data and analyses, the SPD representative stated that this verification is part of the normal investigative process, and an SPD officer will validate GeoTime data and analyses.¹⁵ This is troubling, given that GeoTime enables SPD to annotate maps/graphics & edit visualizations used as the output. It is also concerning because one of the supported file formats for imported data is an Excel file format, which can be edited.¹⁶ This means SPD can modify or fabricate records that GeoTime analyzes. Without a way to track SPD's movements inside the application, it is hard to know whether data or the output has been tampered with or manipulated. This has high costs given that outputs are shared in court presentations, used as evidence, etc.

Another concern is the lack of clarity regarding how SPD obtains the data that GeoTime analyzes. For example, the SIR states that the data are obtained by investigators "under the execution of court ordered warrants, including data from cellular providers and from data extracted from mobile devices," and it cites to the Mobile Device Extraction Tools SIR.¹⁷ However, this contradicts what is actually written in the Mobile Device Extraction Tools SIR, which is that mobile device forensic data can also be obtained via consent agreement with the mobile device owner.¹⁸ Clarity is needed as to whether data can be obtained based on consent alone, what data can be obtained under consent agreement as opposed to search warrant, and under what circumstances. Moreover, there must be policies in place

Finally, there is a lack of clarity about who at SPD has access to GeoTime data inputs and outputs, with which entities outside SPD those data are shared (including law enforcement agencies outside the state), and how those data are shared. When asked about this at the 5/18/22 public engagement meeting, the SPD representative stated that SPD does share case info with other law enforcement agencies as it relates to

¹⁴ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

¹⁵ Ibid.

¹⁶ "Frequently Asked Questions," *GeoTime*, Accessed May 12, 2022, <https://www.geotime.com/frequently-asked-questions>.

¹⁷ SPD, "GeoTime," 6.

¹⁸ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 3.

investigations.¹⁹ This is a particularly pressing issue given recent indications that the US Supreme Court is poised to overturn *Roe v. Wade*, and that states are ready to pass legislation criminalizing abortion.²⁰ Our state recognizes the individual right to abortion care and it is anticipated that Washington will see an influx of people from neighboring states seeking abortion services here.²¹ GeoTime may be used to surveil these people and it is critical that there be restrictions on the ability of SPD to share these data and analysis with law enforcement and other agencies outside the state. Moreover, for any data that are shared, there should be stringent data storage, retention and transfer/sharing safeguards in place to protect the data.

Given the lack of adequate policies described by the SIR and the number of unanswered questions that remain, we have concerns that SPD's use of GeoTime may infringe upon people's civil rights and civil liberties.

II. *Specific Concerns*

- a. **Lack of Clarity on How Often GeoTime is Deployed and Who Determines Whether Deployment Will Occur.** According to the SIR, "GeoTime is utilized frequently by investigators during the investigation of crimes." Conversely, at the public engagement meeting on 4/27/22, SPD representative stated that SPD "rarely" used GeoTime. At the public engagement meeting on 5/18/22, the SPD representative stated that it is used 1-2 times a week by one detective.²² It remains unclear how often GeoTime is deployed (e.g., how many times a week? For how many cases?). In addition, the SIR provides no information about who determines in which cases/when to use GeoTime.
- b. **Lack of Clarity on What Data SPD Inputs Into GeoTime.** Regarding data that SPD manually inputs into GeoTime to produce visualizations, the SIR refers variously to "geodata, such as latitude

¹⁹ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

²⁰ Almanza, Emily Galvin, "The Criminalization of Abortion: What to Expect in a Post-Roe United States," May 6, 2022, <https://www.teenvogue.com/story/criminalization-of-abortion-laws-ro>.

²¹ Ahmed, Tasnim, "As States Move to Restrict Abortion Access, Neighboring States Prepare for Surges in Demand, CNN, April 13, 2022, <https://www.cnn.com/2022/04/13/health/neighboring-states-abortion-bans/index.html>.

²² City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

and longitude” (4) and “location information,” (4) “cell records,” “cell site locations,” (4) “criminal information,” “data from cellular providers and from data extracted from mobile devices” (6), and “Personally Identifiable Information” (14). It does not provide a comprehensive list of data sources that GeoTime aggregates and analyzes.

- c. **Lack of Clarity on How SPD Obtains the Data it Inputs into GeoTime.** The SIR states: “The data analyzed using GeoTime is obtained by investigators under execution of court ordered warrants, including data from cellular providers and from data extracted from mobile device.”²³ This contradicts the Computer, Cellphone, & Mobile Device Extraction Tools SIR, which states that extraction tools are “used only with the device owner’s consent, pursuant to search warrant authority or in certain circumstances outlined in RCW 9.73.210.”²⁴ The implication is that search warrants are not the only means through which data are obtained. Relatedly, when asked at the 5/18/22 public engagement meeting about whether any private information without a warrant or any public data are ever added to GeoTime, the SPD representative stated that SPD does input public data.²⁵ He did not respond to the part of the question asking whether any private information without a warrant is added to GeoTime.
- d. **Lack of Clarity on How SPD Accesses GeoTime and What Access Controls are in Place for GeoTime.** The SIR states that GeoTime can be accessed via licensed workstations and through an online internet portal.²⁶ It later states that “access to the application is limited to SPD personnel via password-protected login credentials. Data is securely input and used on SPD’s password-protected network with access limited to authorized users.”²⁷ It’s unclear from this explanation: (1) what software-level security controls (authentication, authorization, logging, etc.) are in place for *both* the GeoTime workstations and for the portal; (2) whether they are the same access control mechanisms for both the portal and the workstations; and (3) where the internet accessible portal can be accessed from (e.g. can it be accessed from a cell phone?). Without

²³ SPD, “GeoTime,” 6.

²⁴ SPD, “Computer, Cellphone, & Mobile Device Extraction Tool,” 5.

²⁵ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

²⁶ *Ibid.*, 5.

²⁷ *Ibid.*, 9.

this information, it is difficult to assess the privacy risks and suggest measures to mitigate them.

- e. **Lack of Clarity on Which SPD Personnel/Units and How Many Have Access to GeoTime.** In one part of the SIR, it states, “Only trained, backgrounded, and CJIS certified SPD detectives have access to GeoTime.”²⁸ In a different part, it states that log-in credentials “are granted to employees with business needs to access GeoTime” without any elaboration on which employees and the definition of “business needs” (8). At the 5/18/22 public engagement meeting, an SPD representative stated that three detectives have access to GeoTime, and one of those three uses it regularly.²⁹ However, it remains unclear whether these are the only individuals in SPD who have access to GeoTime via both the licensed workstations and the internet portal. There is a large discrepancy between the number of licenses for the internet portal (7 GeoTime Glimpse licenses) and the number of people who purportedly have access (3).
- f. **Lack of Clarity on Which SPD Personnel Have Access to Data Output Generated from GeoTime.** The SIR states that GeoTime is “used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files.”³⁰ However, the SIR does not state which SPD employees has access to those exported files created by GeoTime and how many SPD employees have access to them.
- g. **Lack of Clarity About Data Storage, Safeguards, and Retention.** In response to data storage and retention questions, the SIR states that GeoTime “does not collect information or data...No information is saved inside the GeoTime tool.”³¹ While it may be the case that technically GeoTime does not “collect” data, SPD manually inputs data into GeoTime to generate maps and other visualizations and that data must be hosted/stored somewhere. However, that location is not provided in the SIR. At the 4/27/22 public engagement meeting, the SPD representative stated the internet accessible portal is hosted by GeoTime (i.e., UnCharted Software) but the data that GeoTime uses are not

²⁸ Ibid., 5.

²⁹ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

³⁰ SPD, “GeoTime,” 7.

³¹ Ibid.

hosted there and that he would have to check on where the data are stored.³² The SIR also does not indicate for how long the data are stored/hosted in that location, what safeguards are in place to protect it, who has access to the data, including whether UnCharted Software stores or has access, and when that data must be deleted.

- h. **Lack of adequate policy and practices for validating the accuracy of the data and the analysis that GeoTime provides.** In the SIR, SPD evades the question of how GeoTime checks the accuracy of the information collected by stating: “GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps...”³³ This response does not address what measures SPD takes to ensure that the data it inputs into GeoTime is accurate. It also does not address what steps it takes to validate the accuracy of the GeoTime data output/analysis. GeoTime is a powerful tech that purports to help investigators, among other things, “dispute an alibi or demonstrate criminal intent.”³⁴ Without validation of its analyses, it could have deleterious impacts on the lives of the people whose data is inputted, including implicating the wrong person in a crime.
- i. **Inadequate Oversight Policies.** In response to the question about safeguards in place for protecting data and to provide an audit trail, the SIR states the entities authorized to conduct audits but it does not address whether there are self-audits, third-party audits, or review. It also does not address whether GeoTime has an audit log or not, what that log contains if they in fact have one, and whether that log is sufficient to conduct an audit investigation. At the 4/27/22 public engagement meeting, the SPD representative expressed uncertainty about whether there is a direct audit log about what actions each user takes inside the application.³⁵ At the 5/18/22 public engagement meeting, when asked about the last time an audit was conducted on SPD’s use of GeoTime, the SPD representative referred the questioner to OIG, which strongly suggests no audit has been conducted by OIG or any other entity, including APRS and the federal monitor.³⁶ Without detailed auditing capabilities, or regular auditing, it is not possible to have sufficient

³² City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

³³ Ibid., 13.

³⁴ “Frequently Asked Questions.”

³⁵ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #1,” Accessed June 1, 2022, <https://www.seattle.gov/event-calendar?trumbaEmbed=view%3Devent%26eventid%3D159435112>.

³⁶ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

oversight into how SPD uses GeoTime and whether they are complying with policy.

- j. **Lack of Clarity and Transparency on What Other Tech GeoTime Interfaces With.** The SIR does not specify which other tech, if any, GeoTime interfaces with. SPD stated at the 4/27/22 public engagement session that it doesn't interface with PredPol, Crime View or other predictive policing utility, yet when a member of the public asked if SPD would include that in the SIR, SPD's response was that it was "not a tenable option" for SPD to list all the tech that GeoTime does not interface with.³⁷ Without this information, it is difficult to adequately assess the privacy risks that GeoTime poses.
- k. **Lack of Policy on Purpose of Use and Usage Limits.** The SIR does not fully explain use cases for GeoTime and does not include policies placing limits on its uses.
 - i. **Visualization vs. Predictive Policing.** Without clearer usage limits, analyses provided by GeoTime might be used for predictive policing.
 - ii. **Data.** There are ostensibly no policies governing limits on the kinds of data sources that can be manually input into GeoTime.
 - iii. **Type of crime.** In response to the question of "what are acceptable reasons for access to the equipment and/or data collected?" the SIR states: "Data is only accessed as part of ongoing criminal investigations or under the City of Seattle Intelligence Ordinance."³⁸ It is not specified if there are limits to the type of events (e.g. First Amendment protected demonstrations) or crimes that SPD will investigate via GeoTime (e.g. petty crimes like graffiti and trespassing). At the 4/27/22 public engagement meeting, the SPD representative indicated there is no policy governing the incident types for which SPD may use GeoTime but claimed that "SPD doesn't have time to apply" GeoTime to "lower-level offenses."³⁹ The implication is that with more time and resources, there is nothing stopping SPD from using GeoTime to investigate more offenses, even minor ones.

³⁷ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #1."

³⁸ SPD, "GeoTime," 8.

³⁹ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #1."

1. **No Policies Restricting Use of GeoTime’s Additional Surveillance Features.** The SIR does not provide sufficient information about what components of GeoTime SPD uses and doesn’t use. For example, during the 4/27/22 public engagement meeting, when asked about SPD’s use of GeoTime’s Social Media Analysis functionality, the SPD representative stated SPD does not use this feature of GeoTime.⁴⁰ He claimed this fact was in the SIR, which it is not.⁴¹ There also don’t appear to be any policies restricting SPD’s use of Social Media Functionality. Without a full accounting of the features of GeoTime that SPD uses, it is impossible to assess all the potential privacy risks. With regard to the Social Media Analysis Functionality in particular, social media data will include the private information of non-targeted people so if SPD is using it, measures are necessary to ensure those data are protected and not misused in the GeoTime analysis.
- m. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share GeoTime data and analyses with outside entities⁴² but does not address whether SPD maintains a record of those disclosures. It only addresses recording of public disclosure requests made pursuant to the Public Records Act and the City of Seattle Intelligence Ordinance. Without a record of all disclosures, it is impossible to know who has received these sensitive data.
- n. **Inadequate Data Sharing Policies.** The SIR offers only an extremely general description of who might receive GeoTime data and analyses and how such data would be shared. Neither security protocols for transferring data nor for ensuring that shared data are properly deleted are explicated in the SIR. Indefinite retention of data and insecure sharing processes could lead to exposure of sensitive data, with manifold consequences for those whose data is inputted into GeoTime.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

⁴⁰ Ibid.

⁴¹ SPD, “GeoTime.”

⁴² Ibid., 11.

- a. Which GeoTime functionalities does SPD use?
- b. Which SPD units have access to GeoTime? How many SPD employees have direct access to GeoTime, both via GeoTime Glimpse (internet portal) and GeoTime Desktop (workstations)?
- c. Which SPD units have access to the files (e.g. maps and other visuals) generated by GeoTime? How many SPD personnel have access to those files? What other agencies or groups outside of SPD that have access to GeoTime files?
- d. What other technology does GeoTime interface with?
- e. What are all the data sources that SPD inputs into GeoTime?
- f. Can data manually input into GeoTime be obtained without a warrant and based on two-party consent alone? If so, under what circumstances may the data be obtained without a warrant and what rules set the parameters for GeoTime's use?
- g. How often is GeoTime deployed? How many times/for how many investigations a week is it deployed?
- h. Who determines whether GeoTime should be deployed?
- i. What is the criteria for deployment? Can any detective determine based on their own discretion that deployment of GeoTime is necessary for their investigation? Is supervisor approval required?
- j. What software-level security controls are in place for both the GeoTime workstations and for the internet accessible portal? Are they the same access control mechanisms? Where can the internet accessible portal be accessed from (i.e., a mobile device)?
- k. Where does SPD store/host the data it manually inputs into GeoTime? Is there a difference in where the data are hosted or stored when GeoTime is accessed via the portal vs. via a workstation?
- l. How long are the data stored there? When are the data deleted?
- m. What safeguards are in place to protect the data that is inputted into GeoTime (is the data encrypted? What are the access control mechanisms?)
- n. How does SPD validate the accuracy of the data it manually inputs into GeoTime, as well as GeoTime data outputs/analyses?
- o. Which SPD personnel have access to the data output/files generated from GeoTime? How many SPD personnel have access to the GeoTime data outputs?

- p. What is the nature of the training that SPD personnel receive on GeoTime? How many hours of training do they receive? What does the training cover? Do they receive periodic updated training? Are they provided privacy training specific to the privacy risks associated with GeoTime?
- q. Does GeoTime have an audit log? If so, what does it contain/what information does it collect? Does it log what actions each user takes inside the application?
- r. How often is SPD's GeoTime subject to an audit? When was the last audit of SPD's GeoTime conducted and by which entity (APRS, OIG, or the federal monitor)? Where are the audit reports located?
- s. Does SPD maintain a record of all disclosures of GeoTime data and analyses/output, including those to outside entities?

IV. *Recommendations for Regulation*

Pending answers to the questions above, we can make only preliminary recommendations for regulation of GeoTime. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- There is a specific and restricted purpose of use. There must be a policy defining clear limits on GeoTime's uses, including narrow parameters for: (1) using data that were obtained via consent agreement as opposed to a search warrant; (2) using GeoTime in conjunction with other technology; (3) the use of all of GeoTime's surveillance features; and (4) the event type or crime type that GeoTime is used for.
- The use of GeoTime's social media analysis functionality must be prohibited.
- The use of GeoTime for predictive policing must be prohibited.
- People whose data is obtained via consent agreement must be informed, as part of the consent process, that their data will be inputted into GeoTime.
- There must be strong access controls (authentication, authorization, logging, etc.) in place for both the GeoTime licensed workstations and for the internet accessible portals, as well as for access to GeoTime outputs and analyses.
- Any data inputs or outputs must be securely shared with third parties and properly deleted.

- SPD must disclose/log to whom and under what circumstances GeoTime data inputs and outputs are shared.
- There must be adequate training for all personnel who use GeoTime and the training must include a privacy component specific to the risks inherent to using GeoTime as an investigative tool.
- There must be a detailed direct audit log of user actions within GeoTime, and SPD must produce a publicly available annual audit report about its use of the technology.
- Any data inputs hosted by UnCharted Software or data outputs created via GeoTime are not owned by, used by, or retained by UnCharted Software, and any data inputs and data outputs are properly secured.
- There must be measures in place to validate the accuracy of GeoTime data inputs and outputs/analyses.

Computer, Cell Phone, and Mobile Device Extraction Tools

I. Background

A computer, cell phone, and mobile device extraction tool, also known as mobile device forensic tool (MDFT),⁴³ is a powerful software technology that allows police to circumvent most security features on a person's device to easily extract all the data on the device—including call logs, contacts, text messages, emails, social media posts, photographs, location information, search history, and financial transactions—and systematically search and analyze it. As such, this tool “represent[s] a dangerous expansion in law enforcement’s investigatory powers.”⁴⁴ Its use by SPD raises serious privacy concerns, given the sheer amount of personal, sensitive information stored on people’s smartphones. Eighty-five percent of U.S. adults own a smartphone,⁴⁵ and they generally keep it on their person wherever they go. The implication is that the vast majority of people are vulnerable to having their phones invasively searched by law enforcement. This risk is particularly acute and the privacy infringement is particularly egregious for

⁴³ National Institute of Standards and Technology, “Mobile Security and Forensics,” Accessed May 17, 2022, <https://csrc.nist.gov/Projects/Mobile-Security-and-Forensics/Mobile-Forensics>.

⁴⁴ Koepke, Logan, et al. “Mass Extraction: The Widespread Power of U.S. Law Enforcement to Search Mobile Phones,” *UpTurn*, October 20, 2020, <https://www.upturn.org/work/mass-extraction/>.

⁴⁵ Pew Research Center, “Demographics of Mobile Device Ownership and Adoption in the United States,” April 7, 2021, <https://www.pewresearch.org/internet/fact-sheet/mobile/?menuItem=d40cde3f-c455-4f0e-9be0-0aefcdaee00>.

the many low-income people who rely exclusively on their smartphone to access the internet.⁴⁶

The use of MDFTs by SPD also raises serious civil liberties concerns. This technology enables police to conduct an excessively broad and intrusive search. It provides access that “can be disproportionately invasive compared to the scope of evidence being sought and poses an alarming challenge to existing Fourth Amendment protections.”⁴⁷ Without limitations on use cases and narrowly defined parameters around, for example, what data can be extracted and for what purpose, the use of this tech is ripe for misuse. In particular, the ACLU-WA is concerned about the use of MDFTs by SPD to surveil and ultimately chill constitutionally protected First Amendment activities concerning religion, expression, and assembly. Furthermore, use of MDFTs by SPD likely tracks with disparities in SPD policing practices⁴⁸ and statewide criminal legal system outcomes.⁴⁹ Therefore, it likely disproportionately impacts marginalized groups, including Black people, people of color, and people experiencing poverty or homelessness.

SPD does not disclose in the SIR which vendor provides its MDFT tools, which products it uses, and how many licenses it has for each product. When asked about its MDFT vendors at the 5/18/22 public engagement meeting, the SPD representative stated that SPD will not disclose what vendors they use because this information “could hinder investigative efforts.”⁵⁰ In particular, the representative cited concerns that having this information would help people create so-called “counter-measures.”⁵¹ Without vendor information though, it is challenging to assess the privacy and civil liberties impacts of the technology. It is also antithetical to the

⁴⁶ “As of early 2021, 27% of adults living in households earning less than \$30,000 a year are smartphone-only internet users—meaning they own a smartphone but do not have broadband internet at home.” Vogels, Emily A., “Digital Divide Persists Even As Americans with Lower Incomes Make Gains in Tech Adoption,” June 22, 2021, <https://www.pewresearch.org/fact-tank/2021/06/22/digital-divide-persists-even-as-americans-with-lower-incomes-make-gains-in-tech-adoption>.

⁴⁷ Koepke, et al., “Mass Extraction.”

⁴⁸ See, e.g., Kasakove, Sophie, “Seattle Bike Helmet Rule is Dropped Amid Racial Justice Concerns,” *New York Times*, February 18, 2022, <https://www.nytimes.com/2022/02/18/us/seattle-bicycle-helmet.html>; “Report Finds Racial Disparities in Stops, Arrests, Use-of-Force by Seattle Police Officers,” *KOMO News*, July 15, 2021, <https://komonews.com/news/local/report-finds-racial-disparities-in-stops-arrests-use-of-force-by-seattle-police-officers>.

⁴⁹ “Race and Washington’s Criminal Justice System: 2021 Report to the Washington Supreme Court,” *Fred Korematsu Center for Law and Inequality, Seattle University School of Law* <https://law.seattleu.edu/media/school-of-law/documents/centers-and-institutes/korematsu-center/initiatives-and-projects/race-and-criminal-justice-task-force/task-force-20/2021-race-and-washingtons-criminal-justice-system-report.pdf>.

⁵⁰ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

⁵¹ *Ibid.*

spirit and purpose of the Seattle Surveillance Ordinance process, which was established in part to create transparency about Seattle agencies' use of new and old technology.

Via Public Records Act disclosures, the ACLU-WA is aware that SPD uses or has used a variety of device extraction tools, including but not limited to: Cellebrite⁵² (and Cellebrite's Advanced Investigative Services, or CAIS); Black Bag Forensic Software; GrayShift GrayKey; Octoplus; Medusa Pro; MSAB Incorporated aka Micro Systemation, and XRY Office Version.⁵³ It's noteworthy that law enforcement often purchase tools from multiple vendors in order to maximize the types of devices they can extract data from (e.g., iPhone, Android, etc.).⁵⁴

Concerns with Data Extraction and Analysis

MDFTs can reliably access and extract some, if not all, data from most phones, with very few exceptions.⁵⁵ According to the SIR, there are very few hurdles to SPD officers or detectives using this technology, despite how easily it provides full access to device data. The SIR states that in order to use MDFTs, investigators must fill out a request form that includes a copy of consent or search warrant authorizing the extraction.⁵⁶ The SIR further states that "unit supervisors are responsible for screening all technology deployments to ensure that the appropriate authorities are in place before approving deployment of tracking technology."⁵⁷ However, the SIR does not specify any criteria for determining whether MDFTs should be deployed in the first place—i.e., what constitutes a case where the deployment of MDFTs is considered necessary?

The SIR does not adequately convey this invasiveness and the implications for privacy rights and civil liberties. It describes the data extraction process in the following way: "Extracting information from computer devices involves taking a snapshot of a computer's hard drive, preserving the entirety of digital information on the hard drive at a particular point in time."⁵⁸ This description does not explicitly communicate the wide range of data sources and the sheer amount of data that MDFTs can extract and analyze, which is troublingly vast. On the most basic level, MDFTs can extract photographs taken from smartphones along with the metadata from

⁵² Hvistendahl, Mara and Sam Biddle, "Use of Controversial Phone-Cracking Tool is Spreading Across Federal Government," *The Intercept*, February 8, 2022, <https://theintercept.com/2022/02/08/cellebrite-phone-hacking-government-agencies/>.

⁵³ On file with the author.

⁵⁴ Koepke et al., "Mass Extraction."

⁵⁵ *Ibid.*

⁵⁶ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 6.

⁵⁷ *Ibid.*, 8.

⁵⁸ *Ibid.*, 5, [DRAFT SIR - Computer, Cellphone, & Mobile Device Extraction Tools.pdf \(seattle.gov\)](#)

those photos, such as the GPS coordinates of where a photo was taken and the time and date it was taken, thereby providing a “geographic record of the person’s movements,” as well as the movements of anyone else in those photos.⁵⁹ MDFTs can also extract app data and access location information, in-app communications, and in-app photos from those apps.⁶⁰ Cellebrite software tools, for example, can extract and interpret data from at least 181 apps on Android’s operating system and at least 148 apps on Apple iPhones.⁶¹ These can include everything from social media apps like Instagram, Facebook, Snapchat, and Twitter; navigation apps like Google Maps; web browsers like Chrome and Firefox; and dating apps like Tinder, Grindr, and OkCupid.⁶² They can even extract data from encrypted messenger apps like Signal and Telegram.⁶³ MDFTs are also frequently updated by the vendor in order to be able to extract data from an ever growing number of apps.⁶⁴

Many apps are account-based, i.e., data are stored on the cloud as opposed to directly on the device, and can be accessed remotely. MDFTs, including Cellebrite, often have specific features or products that provide law enforcement access to those data as well.⁶⁵ Google’s Location History is an example of a particularly rich cloud-based data source that MDFTs enable access to. Any user with their location history turned on in their Google account will have years’ worth of precise location records stored online in their Google Account, which can be extracted with MDFTs.⁶⁶

In addition to app data, MDFTs can access “deleted” data from phones, as well as phone meta data, i.e., data about how people use their phone (e.g., when certain applications were installed and deleted, how often an application was used, when a device was locked or unlocked, when a message was viewed, etc.).⁶⁷

MDFTs commonly extract all these user data by circumventing the device’s security features using various tactics that exploit the device’s security flaws or built-in diagnostic or development tools. For example, since March 2016, Cellebrite has added lock-bypass support for about 1500 devices, which exploits device vulnerability to force the phone to skip the passcode-checking step when it turns on.⁶⁸ Moreover, to get around encryption, MDFTs can repeatedly guess the decryption key, which is usually based on

⁵⁹ Koepke et al., “Mass Extraction.”

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

the phone's log-in password, to identify the correct one, thereby enabling the MDFT to decrypt the phone's contents.⁶⁹ It's been estimated by John Hopkins professor and security technologist Matthew Green that this password-guessing process would take at most 13 minutes for a 4-digit passcode (average 6.5 minutes), 22 hours for 6 digits (average 11.1 hours), and 92 days for 8 digits (average 46 days).⁷⁰ iPhones (which are the device used by 45% of smartphone users) default to a six digit passcode. With GrayKey or Cellebrite Premium (both of which SPD has owned or owned in the past), law enforcement can decrypt the data on an iPhone in less than a day, and on, average less than half a day.⁷¹

Even without an encryption key though, MDFT's can still extract plenty of phone data because phones don't encrypt all data on a device.⁷² There are also many phones that don't encrypt user data, or that have encryption schemes that can be dismantled. If all else fails, law enforcement can install on the device a spyware tool, such as the one provided by Grayshift (a vendor SPD uses), which enables phone access by recording future password entries⁷³

If law enforcement is unable to access and extract data from a device in house, they can send it to the vendor for "Advanced Services." At the 5/18/22 public engagement meeting, SPD stated they use "white glove" services which entails sending the phone to the vendor and having them extract the data.⁷⁴ Public records confirm SPD utilizes these services. They show, for example, that in 2018, SPD purchased 20 "vouchers for service that unlocks, extracts, and decrypts data from cellular phones" for over \$33,000.⁷⁵ Emails from Cellebrite's Advanced Services Team to an SPD detective show Cellebrite unlocked iPhones within days or weeks.⁷⁶

In addition to data extraction capabilities, MDFT's also provide powerful analysis tools that allow law enforcement to quickly sort, search, examine, and ultimately make meaning out of the vast trove of data they now have at their fingertips. These details are also omitted from the SIR. Data analysis tools include data visualization functionalities that can, for example, show

⁶⁹ Ibid.

⁷⁰ Green, Matthew [matthew_d_green], "Guide to iOS estimated passcode cracking times (assumes random decimal passcode + an exploit that breaks SEP throttling): 4 digits: ~13min worst (~6.5avg) 6 digits: ~22.2hrs worst (~11.1avg) 8 digits: ~92.5days worst (~46avg) 10 digits: ~9259days worst (~4629avg)," *Twitter*, April 16, 2018, https://twitter.com/matthew_d_green/status/985885001542782978.

⁷¹ Koepke et al., "Mass Extraction."

⁷² Ibid.

⁷³ Ibid.

⁷⁴ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

⁷⁵ Koepke et al., "Mass Extraction."

⁷⁶ Ibid.

full text conversations as a chat instead of as individual messages or create a network map using contact data in order to reveal connections and relationships.⁷⁷ Moreover, they include data searching functions like basic keyword search but also more advanced options like Cellebrite's "search by face" function that enables law enforcement to compare an image of a person's face to all the other images of faces found on the phone.⁷⁸ With Cellebrite, law enforcement can also input their own images into the software and search for similar images on the device.⁷⁹ These visualization functionalities can be applied to data from multiple phones to discern connections between people, through, for example, shared contacts, call or text correspondence, or account information.⁸⁰

Despite the power MDFTs give SPD to broadly access people's most sensitive data, it is not clear from the SIR how often MDFTs are utilized and for what kinds of cases. The SIR cites that SPD uses these tools to investigate internet crimes against children, via their Sexual Assault and Child Abuse (SAU) Unit.⁸¹ It further states that the Technical and Electronic Support Unit (TESU) "manages extraction tools for other SPD investigations"⁸² but it is unclear what those "other" SPD investigations. An extensive report written by UpTum on the use of MDFTs by law enforcement agencies across the country, including SPD, found that MDFTs are used as "an all-purpose investigation tool for a broad array of offenses."⁸³ In other words, the use of MDFTs by law enforcement is routinely used for a variety of different kinds of investigations. During their investigation, UpTum received "hundreds of cellphone extraction request forms" as part of a public records request to SPD. ACLU-WA's analysis of SPD's logs of extractions records found that between September 19, 2016 and March 20, 2017, a six-month period, SPD attempted at least 194 extractions, 67 which were failures and 127 that were successful. This is a conservative estimate, given that these records are likely incomplete and ostensibly don't include any extractions sent to the vendor for "Advanced Services."

Concerns with Consent Searches

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 6.

⁸² Ibid.

⁸³ Koepke et al., "Mass Extraction."

Relatedly, there are inadequate policies that govern and ultimately limit SPD's use of this technology. According to the SIR, MDFTs are "utilized only with the device owner's consent or pursuant to search warrant authority"⁸⁴ and these measures mitigate privacy risks, such as "concerns that data may be accessed out of scope."⁸⁵ However, there are several reasons to believe that the consent requirement is not rights protective and will not sufficiently limit the misuse of MDFTs.

Firstly, there is an inherent power imbalance between police officers and members of the public,⁸⁶ given that police are armed and act with state authority. That imbalance is arguably greater when the interaction is between police and Black people or people of color, who are disproportionately the targets of violent police practices and may feel pressure to "consent" to a phone search because of fear of being harmed by police if they do not consent.⁸⁷ In this context, "consent" is obtained under duress and is arguably coerced, not voluntary.

In addition to the power imbalance, the notion of a consent agreement is problematic because of the significant information asymmetry between police officers and members of the public about MDFTs. It is reasonable to assume that the vast majority of people have very little if any knowledge of MDFTs and their capabilities, or much if any understanding of how much of their personal, private and often sensitive data are stored on their phones and can be easily and quickly accessed via this technology. Any consent process is unlikely to adequately convey these things and fix the information deficit, especially in the absence of legal counsel. Arguably, no one can really know what they are consenting to, so truly informed, meaningful consent is not possible.

This is especially the case in situations where the device owner is a juvenile or a non-English speaker. At the 5/18/22 public engagement meeting, when asked how the consent process is different for non-English speaking people, the SPD representative stated SPD would "try to have an interpreter on site or use a language line to make sure we have informed consent."⁸⁸ This statement is troubling because it implies that it is not standard practice to provide non-English speakers a translator and a consent form in their language during the consent process. Any consent obtained without interpretation would be constitutionally invalid.

⁸⁴ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 3.

⁸⁵ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 15.

⁸⁶ Nadler, Janice, "No Need to Shout: Bus Sweeps and the Psychology of Coercion," *The Supreme Court Review*, vol. 2002, 2002, pp. 153-222.

⁸⁷ Strauss, "Reconstructing Consent."

⁸⁸ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

Lastly, even if consent processes provide for interpretation, consent searches are problematic because consent agreements generally do not define adequate parameters limiting the phone search, so police have huge amounts of discretion about what data they extract with MDFTs, the scope of the data they extract, and what they do with those data. For all these reasons, SPD's reliance on consent agreement to conduct phones searches with MDFTs is extremely problematic and concerning. This concern is exacerbated by SPD's heavy reliance on consent agreement to deploy MDFTs; according to UpTurn's report, "approximately one third of the phones the Seattle Police Department sought to extract data from were consent searches."⁸⁹

Finally, it is unclear who within SPD and which entities outside SPD have access to extracted data and how those data are protected. The SIR states: "Extraction is conducted in-house and data is provided to the requesting Officer/Detective for the investigation file. TESU then purges all extracted data. No data is stored by a vendor, as the necessary tools are maintained entirely offline and on-premises."⁹⁰ Further down, the SIR states "All data extracted is stored securely within SAU—not accessible to any vendor."⁹¹ However, this contradicts evidence, cited earlier, that SPD relies on the vendor to unlock phones they can't unlock themselves on premises. Moreover, during the 5/18/22 public engagement meeting, the SPD representative stated that has it sent devices to the King County Sheriff's Office in the past for "Chip-Off" extraction.⁹² The implication then is that extraction is not always conducted in house, that extraction may be conducted by the vendor or another law enforcement agency, and therefore that vendor and the law enforcement agency have access to the data. However, the SIR does not specify the policies or practices that govern how the data extracted by the vendor are safeguarded while it is in the possession of the vendor.

Concerns with Data Sharing

Moreover, the SIR states that "data obtained from the system may be shared outside SPD with other agencies, entities, or individuals within legal guidelines or as required by law."⁹³ The sharing of data extracted via MDFTs with law enforcement agencies outside Washington state is particularly troubling given that many states have signaled they are ready to criminalize abortions in the wake of a US Supreme Court draft leak which indicates the high court is ready to overturn *Roe v. Wade*. Our state remains a safe haven for people to exercise their reproductive rights and it

⁸⁹ Koepke et al., "Mass Extraction."

⁹⁰ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 6

⁹¹ Ibid.

⁹² City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

⁹³ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 12.

is anticipated that Washington will see an influx of people from neighboring states seeking abortion services here.⁹⁴ MDFTs may be used to surveil these people and it is critical that there be restrictions on the ability of SPD to share these data with law enforcement and other agencies outside the state. Moreover, for any data that are shared, there should be stringent data storage, retention and transfer/sharing safeguards in place to protect the data.

Given the lack of adequate policies described by the SIR and the number of unanswered questions that remain, we have concerns that SPD's use of MDFTs may infringe upon people's civil rights and civil liberties.

II. *Specific Concerns*

- a. **Lack of clarity about MDFT vendor names, product names, and the number of licenses SPD owns.** The SIR does not disclose vendor names, product names or the number of licenses. At the 5/18/22 public engagement meeting, the SPD representative stated that SPD would not share information about vendor names because this information "could hinder investigative efforts."⁹⁵ Without this information, it is challenging to comprehensively assess the impacts of MDFTs on privacy rights and civil liberties, as well as SPD's need for this technology.
- b. **Lack of Clarity and Transparency on What Other Tech MDFTs Interface With.** The SIR does not specify which other tech, if any, SPD uses in conjunction with MDFTs. MDFTs are capable of interfacing with a host of other technologies, including ones owned by SPD such as GeoTime. GeoTime states on their website that their technology can import data from Celebrite software tools, which public records show SPD owns or has otherwise owned in the past. Without this information, it is difficult to adequately assess the privacy risks that MDFTs pose.
- c. **Lack of Clarity on Which SPD Personnel and How Many Have Access to MDFTs and How Often They are Deployed.** The SIR does not specify how many SPD personnel

⁹⁴ Ahmed, "States Move to Restrict Abortion Access."

⁹⁵ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

are trained and certified in the use of MDFTs and/or otherwise have access to MDFTs. It also does not indicate how often MDFTs are deployed. Without this information, it is difficult to adequately assess the impacts on privacy rights and civil liberties, as well as SPD's need for this technology.

- d. **Lack of Clarity on Which SPD Personnel and How Many Have Access to Extracted Data.** The SIR states: "Only authorized SPD users can access the device or the extracted/imaged data while it resides in the extraction/imaging software" and that when the data are moved to an investigative file, access to it there is again "limited to authorized detectives and identified supervisory personnel." However, it does not specify who qualifies as an "authorized" user or detective. Therefore, it remains unclear which SPD personnel and how many have access to data that has been extracted via MDFTs.
- e. **Lack of Clarity on How SPD Mitigates Potential for Inadvertent or Unauthorized Data Collection.** In response to the question of how SPD minimizes improper data collection, the SIR states, in part, that "[u]se of extraction tools is constrained by consent or court order providing the legal authority."⁹⁶ This is a vague statement that does not describe the measures SPD takes to ensure that the data extracted via MDFTs is narrowly tailored to the needs of the investigation.
- f. **Legitimacy of Consent-Based Use of MDFTs and Lack of Clarity on How Consent is Obtained.** It is unlikely that consent-based use of MDFTs is legitimately consensual given the power and information asymmetry between police and members of the public, and particularly for communities that are disproportionately surveilled and policed. There are important racial differences in how individuals interact with law enforcement, and individuals may fear that refusing to give their consent to police will lead to deadly consequences. Additionally, the SIR does not describe the process by which officers obtain consent from witnesses or confidential informants. It is unclear if this process is standardized.
- g. **Lack of Clarity on Vendor Access to Data.** According to the SPD representative at the 5/18/22 public engagement meeting,

⁹⁶ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 8.

SPD relies on vendors to extract data from devices that it cannot do itself in-house with off-the-shelf MDFT tools.⁹⁷ This is corroborated by UpTum's extensive report on MDFTs, which examined public records from SPD. This contradicts the SIR, which states that all extraction is done in-house and that vendors do not have access to data. The implication is that vendors do have access to device data. This is extremely concerning because it increases the risk of those data being exposed or otherwise misused.

- h. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share extracted data "with other agencies, entities, and individuals" outside of SPD, which presumably includes agencies from outside the state. However, it does not specify under what circumstances data would be shared or the policies and practices in place that govern data storage, retention and transfer/sharing to protect the data. It also does not indicate whether these disclosures are documented, and how.
- i. **Low Threshold for MDFT Deployment.** The SIR states: "As it relates to extraction tools themselves, use is authorized, and constrained, only by consent or search warrant."⁹⁸ There is no indication there are any criteria for determining whether use of MDFTs is warranted or appropriate in the first place, despite the invasiveness of the technology and the lack of limitations on the scope of data collection via these tools. This suggests the barrier to using extraction tools is very low, even though the privacy infringement is incredibly egregious.
- j. **Lack of Clarity on Safeguards in Place to Protect MDFTs and Extracted Data From Unauthorized Access.** The SIR states, regarding SAU extraction requests, that a personal password is needed to log onto the device.⁹⁹ A separate password is required to access extracted data and that same password is required to move the extracted data from the device to a portable USB.¹⁰⁰ No access controls are specified for TESU extraction requests or data extracted by TESU. Once data has been extracted, the MDFT can "either save the files to

⁹⁷ City of Seattle IT Department, "Group 4b Surveillance Technologies Public Meeting #2."

⁹⁸ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 15.

⁹⁹ SPD, "Computer, Cellphone, & Mobile Device Extraction Tool," 7

¹⁰⁰ Ibid.

removable physical storage (like a USB drive or similar media) or a computer workstation. These extracted data files are then accessed using the specialized installed software,” which enable the user to examine and search the data.¹⁰¹ However, the SIR does not specify what access control mechanisms are in place for accessing this software and the data on it, including whether data are encrypted. This is extremely concerning as it puts private data at risk of being improperly accessed and searched.

- k. Lack of Clarity About Data Storage, Safeguards, and Retention.** The SIR provides only a vague description of how extracted data are stored, safeguarded, and for how long they are retained. It states that “once the data has been extracted and provided to the investigating detective for inclusion in the investigation file, all data is purged from the extraction devices.” This leaves out critical details about what access control mechanisms are in place to safeguard the data and how long data there are retained. The SIR also states that the data are sometimes saved to “removal physical storage (like a USB drive or similar media) or a computer workstation”¹⁰² but it does not specify what policies and practices govern data storage, safeguards and retention on those mediums.
- l. Inadequate Data Sharing Policies.** The SIR offers only an extremely general description of who might receive device data extracted with MDFTs and how such data would be shared. Neither security protocols for transferring data nor for ensuring that shared data are properly deleted are explicated in the SIR. Indefinite retention of data and insecure sharing processes could lead to exposure of sensitive data, with manifold consequences for those whose data is collected.
- m. Lack of Clarity on Use of MDFTs to Search the Phones of Minors.** The UpTurn report on MDFTs provides evidence via public records that SPD uses MDFTs to extract data from the device of minors.¹⁰³ However, the SIR does not mention this fact. When asked at the 5/18/22 public engagement meeting

¹⁰¹ Ibid., 5.

¹⁰² Ibid.

¹⁰³ Citing to a King County Search Warrant, the report states that SPD “[o]fficers were looking for a juvenile who allegedly violated the terms of his electronic home monitoring. Officers eventually located the individual, and, after a ‘short foot pursuit...he threw several items to the ground,’ including a phone. Officers located the phone and sought to search it for evidence of escape in the second degree.” Koepke et al., “Mass Extraction.”

about what percentage of devices SPD extracts belong to minors, SPD claimed they don't have that data, which suggests SPD does not collect data on the demographics of the people whose phones they search. The use of MDFTs to search the phones of minors is very concerning, given that minors are a vulnerable population and are entitled under law to extra protections to safeguard their rights. Moreover, the lack of data collection on MDFT use makes it challenging, if not impossible, to detect whether there is bias in SPD practices.

- n. **Lack of Policy on Purpose of Use and Usage Limits.** The SIR does not fully explain use cases for MDFTs and does not include policies placing limits on its uses.
- i. **Scope of data collection.** The SIR states that “[a] certified user within TESU conducts the extraction and provides the entirety of the data to the requesting Officer/Detective for the investigation file.”¹⁰⁴ The SIR also states that improper data collection is limited through the consent agreement or a search warrant¹⁰⁵ but does not specify how these create limitations on data collection if in fact the detective is given the entire contents of a device. Arguably there are no measures that constrain or minimize inadvertent or improper data collection since virtually everything is collected.
 - ii. **Type of offense or investigation.** According to the SIR, SPD’s SAU uses MDFTs to investigate internet crimes against children¹⁰⁶ and the TESU “manages extraction tools for other SPD investigations”¹⁰⁷ without elaboration on what those “other investigations” are. Furthermore, the SIR does not specify if there are limits to the type of events (e.g. First Amendment demonstrations) or offenses that SPD will investigate (e.g. petty crimes like graffiti and trespassing).
 - iii. **Tools MDFTs interface with.** The SIR does not specify any limitations on the technology that MDFTs can interface with.

¹⁰⁴ SPD, “Computer, Cellphone, & Mobile Device Extraction Tool,” 7.

¹⁰⁵ *Ibid.*, 8.

¹⁰⁶ *Ibid.*, 6.

¹⁰⁷ *Ibid.*

- o. **Lack of clarity about oversight.** The SIR states that both TESU and SAU “maintain logs of deployment,”¹⁰⁸ “all deployments of extraction tools are documented,”¹⁰⁹ and “logs of collected information are available for audit,”¹¹⁰ but it does not specify what information is collected exactly. When asked at the 5/18/22 about the last time an audit was conducted, SPD did not have a response and referred participants to OIG for an answer, strongly suggesting there has is no history of auditing. Without detailed auditing capabilities, or regular auditing, it is not possible to have sufficient oversight into how SPD uses MDFTs and whether they are complying with policy.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

- a. Which vendor(s) provide SPD the extraction tools they use?
- b. Which extraction tools and how many does SPD currently own?
- c. How many licenses does SPD have for each MDFT product?
- d. What is the cost to obtain and maintain each? What funding source(s) does SPD use to cover these costs/expenditures?
- e. With what frequency/how often does SPD use extraction tools?
 - a. How many times a week/for how many investigations a week is it used?
- f. Besides child sexual assault and child abuse investigations, what kinds of investigations are extraction tools used for? Describe the range of investigations and what kinds of investigations they are mostly used for.
- g. How often are extraction tools used in the field vs. at a unit work station? Under what circumstances are they used in the field vs. at a unit work station?
- h. What does the training and certification for these extraction devices entail?
 - a. How many hours of training do they receive? What does the training cover?
 - b. Do they receive periodic updated training?
 - c. Is there a privacy component to the training that is specific to the privacy risks of this tech? (response to 7.2 indicates no.)

¹⁰⁸ Ibid., 16

¹⁰⁹ Ibid., 8

¹¹⁰ Ibid., 10

- i. What does the process of obtaining consent from the phone owner look like?
 - i. In what context does an officer/detective typically ask a person for consent to access their phone?
 - ii. At the 5/18/22 public engagement meeting, the SPD representative indicated that a person can consult a lawyer before signing the form. Is that something the person is explicitly informed of?
 - iii. Is there a script that officers/detectives follow when obtaining consent? If so, what does that script say?
 - iv. What information is the phone owner provided about how their data will be extracted and what data? Is the person informed both verbally and in writing that the extraction tool will extract a full copy of data from their device—all emails, texts, photos, location, app data and more—which can then be programmatically searched?
 - v. Does policy require that non-English speakers be taken through the consent process in their native language?
 - vi. Does policy permit SPD to seek consent from minors to search their device with MDFTs? If so, how does that process differ, if at all, from the process used for non-minors?
- j. When an officer/detective makes a request to a supervisor to use a data extraction tool, are they required by policy to articulate something they are specifically looking for?
- k. What policies and practices and/or procedures limit the scope of data SPD extracts with MDFTs?
- l. How does SPD safeguard the data of people on the device who are not under investigation (i.e., smart phones usually contain the private data of other people, such as location data from photos or social media pages)?
- m. What policies and practices and/or procedures minimize improper or inadvertent data collection?
- n. Question 4.10 of the SIR asks about safeguards in place for protecting data from unauthorized access and to provide an audit trail. SPDS's response is not very detailed or satisfactory. What safeguards are in place for protecting data from unauthorized access (encryption, access control mechanisms, etc.) and to provide an audit trail (view logging, modification logging, etc.)?
- o. How are device data safeguarded when the device is sent to the vendor for extraction? How does SPD ensure that vendors

- providing “Advanced Services” don’t receive improper/unauthorized access to device data?
- p. How often is a deployment audit performed? How often is a request audit performed? When was the last time an audit was performed for each?
 - q. The SIR states: “Once the data has been extracted and provided to the investigating detective for inclusion in the investigation file, all data is purged from the extraction devices.” How much time is data typically stored on an extraction device before it is downloaded to the investigation file? Is it immediate? Is deletion of data on the extraction device also immediate? Is that reflected in the training?
 - r. What other technologies, if any, do MDFTs interface with? What policies, if any, limit the technologies that MDFTs interface with?
 - s. Who has access to the data on the extraction device? What constitutes an “authorized user”? How many “authorized users” within SPD have access to the data?
 - t. Who within SPD has access to the data once it has been downloaded out of the extraction tool? How many people have access?
 - u. Which agencies, entities and individuals outside of SPD can SPD share extracted data with? Are these disclosures documented? If so, where and how?
 - v. What data storage, retention and transfer/sharing safeguards in place to protect the data?
 - w. Are data obtained via extraction tools subject to the PRA?

IV. *Recommendations for Regulation*

Pending answers to the questions above, we can make only preliminary recommendations for regulation of Computer, Cell Phone, and Mobile Device Extraction Tools. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- The use of consent searches of mobile devices must be prohibited.
- The plain view exception for digital searches must be abolished.
- There is a specific and restricted purpose of use. There should be policy defining clear limits on the use of MDFTs, including narrow parameters for: (1) data collection (2) using MDFTs in conjunction with other technology; (3) the event type or offense type that MDFTs are used for.
- There must be strong access controls (authentication, authorization, logging, etc.) in place for licensed workstations as well as for access

to extracted data on whatever medium they exist, including removable physical storage like a portable USB drive.

- Any device data extractions must be securely shared with third parties and properly deleted.
- SPD must create and abide by robust data deletion and sealing policies.
- SPD should disclose/record to whom and under what circumstances extracted device data are shared.
- There is adequate training for all personnel who use MDFT's and that the training includes a privacy component specific to the risks inherent to using MDFT's as an investigative tool.
- There must be a detailed and direct public audit log of user actions within MDFT software, and these logs must be easy to understand. SPD must produce a publicly available annual audit report about its use of the technology.

Camera Systems

I. *Background*

Camera systems are a surveillance technology that enables law enforcement to monitor and record video and the sound of people's activities. SPD uses their camera systems in a "covert" manner, so that those who are the target of this surveillance (and ostensibly all others in proximity) are unaware they are being surreptitiously recorded. According to the SIR, "these covert cameras are disguised and used to record specific events related to an investigation."¹¹¹ They are either concealed on a person or hidden in or on objects.¹¹² The SIR states they are used by SPD to record activities "in plain view" where there is no reasonable expectation of privacy, and to record activities in a setting where a reasonable expectation of privacy exists. The SIR also indicates that SPD uses cameras "for video recording in the presence of a confidential informant or undercover officer as allowed by law."¹¹³

¹¹¹ Seattle Police Department, "2022 Surveillance Impact Report: Camera Systems," Accessed May 23, 2022, <https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20Camera%20Systems.pdf>.

¹¹² SPD, "Camera Systems," 6.

¹¹³ Ibid.

The use of undercover or covert cameras raises serious privacy and civil liberties concerns. Research shows that law enforcement disproportionately target certain groups with camera surveillance, namely Black people, people of color, young people, and people living in poverty. One study out of Great Britain showed that Black people were surveilled at a rate one-and-a-half to two-and-a-half times higher than their representation in the public.¹¹⁴ In general we expect the use of camera surveillance to track or mirror racial and socio-economic disparities in police practices more broadly,¹¹⁵ so that neighborhoods that are over-policed to begin with are targeted for surveillance.¹¹⁶ Covert camera systems may also be used to surveil and ultimately chill constitutionally protected First Amendment activities concerning religion, expression, and assembly. For example, the SIR explicitly mentions the use of camera systems to surveil “places of worship that have been seriously vandalized or whose congregants have been threatened.”¹¹⁷ Given the recent history of racialized surveillance of Muslims and mosques under the mantle of “homeland security” and “counter-terrorism,”¹¹⁸ the use of this technology to potentially monitor religious minorities and their communities may chill the free exercise of religion and raise concerns about discrimination and racial profiling.

The SIR does not specify the vendor or product names of the camera systems SPD uses, nor does it provide much of any detail about the capabilities of those cameras. When asked about it at the 5/18/22 public engagement meeting, the SPD representative stated that SPD would not share information about vendor names because this information “could hinder investigative efforts.”¹¹⁹ Without this information, it is challenging to adequately assess all the privacy and civil liberties impacts of this technology, and SPD’s need for it.

Camera systems vary widely in their complexity, interconnectivity, and capability. They may be able to tilt, pan, and/or zoom. Some capture high-

¹¹⁴ Norris, Clive and Gary Armstrong, *CCTV and the Social Structuring of Surveillance*, Routledge, 2006, p. 162.

¹¹⁵ Kasakove, “Seattle Bike Helmet Rule is Dropped Amid Racial Justice Concerns.”

¹¹⁶ See, for instance, Hitchcock, Ben, “You’re Being Watched: Police Quietly Deploy Cameras Near Public Housing,” *civil.com*, January 15, 2020, <https://www.civil.com/youre-being-watched-police-quietly-deploy-cameras-near-public-housing/>; C-VILLE Weekly, Todd, Gracie, “Police Cameras Disproportionately Surveil Nonwhite Areas of DC and Baltimore, November 19, 2020, <https://cnsmaryland.org/2020/11/19/police-cameras-disproportionately-surveil-nonwhite-areas-of-dc-and-baltimore-cnss-finds/>.

¹¹⁷ SPD, “Camera Systems,” 5.

¹¹⁸ Khan, Saher and Vignesh Ramachandran, “Post 9/11 Surveillance Has Left a Generation of Muslim Americans in a Shadow of Distrust and Fear,” *PBS.org*, September 16, 2021, <https://www.pbs.org/newshour/nation/post-9-11-surveillance-has-left-a-generation-of-muslim-americans-in-a-shadow-of-distrust-and-fear>.

¹¹⁹ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

definition images so even small details can be detected. They can be panoramic or otherwise wide-angle, enabling wide-area coverage with a single camera. They may also be remotely operated and/or have a feed that can be monitored. Some cameras may also record at nighttime or in low light, and may even use infrared or heat vision for dark areas where night vision is not sufficient. They may rely on motion sensors or are otherwise motion-activated. SPD's fixed location covert cameras appear to be motion-activated, since the SIR states "they are most often set to record only when motion is detected."¹²⁰ Camera systems may have audio capabilities, too. According to the SIR, SPD's covert camera systems "capture images only, not sound,"¹²¹ but it is not clear whether audio is a setting that is turned off or if the cameras do not have the capability to record sound at all. In response to a question on the SIR asking about data retention policies, SPD writes: "Per the Washington Secretary of State's Law Enforcement Records Retention Schedule, investigational conversation recordings are retained 'for 1 year after transcribed verbatim and verified OR until disposition of pertinent case file, whichever is sooner, then Destroy' (LE06-01-04 Rev. 1)."¹²² This appears to contradict earlier statements that audio is not recorded.

Some camera systems can be paired with other technologies, including automated license plate readers (ALPRs)¹²³ and facial recognition,¹²⁴ which renders the technology even more invasive. However, the SIR does not specify whether their camera systems have any of these features or otherwise interface with these other technologies.

Based on the SIR, there appear to be few barriers to SPD officers and detectives using covert camera systems, and the few hurdles that exist are very low. The Technical and Electronic Support Unit (TESU) manages, maintains, deploys and/or installs the covert camera systems that SPD uses.¹²⁵ An SPD officer or detective that wants to use a covert camera for their investigation must submit a request form to TESU that "outline[s] the equipment requested and the case number." It's noteworthy that in a different part of the SIR, it states that officers or detectives make a verbal request to the TESU and TESU personnel will complete a form for them.¹²⁶ All requests are screened by a TESU supervisor but the SIR does

¹²⁰ SPD, "Camera Systems," 6.

¹²¹ Ibid.

¹²² "Automated License Plate Readers," *ACLU*, Accessed May 30, 2022, <https://www.aclu.org/issues/privacy-technology/location-tracking/automatic-license-plate-readers>

¹²³ "Face Recognition Technology," *ACLU*, Accessed May 30, 2022, <https://www.aclu.org/issues/privacy-technology/surveillance-technologies/face-recognition-technology>.

¹²⁴ SPD, "Camera Systems," 7.

¹²⁵ Ibid., 8.

not specify what that screening process entails.¹²⁶ In addition to the form, to request a camera that will record in plain view, officers or detectives have only to show reasonable suspicion, which is a very low bar, ostensibly giving officers plenty of discretion to determine when, where, and against whom to deploy cameras. SPD's decisions around where to deploy cameras, for example, may reflect biases that already exist about which neighborhoods are considered "high crime" (i.e., neighborhoods that are already over-policed). It may also open the door to a fishing expedition, where officers aren't looking for anything in particular but plan to deploy cameras in the hopes of capturing criminal activity.

In general, "plain view" settings, which are an exception to the search warrant requirement under the Washington state constitution, are not defined in the SIR. SPD's characterization of plain view settings versus settings where there is a reasonable expectation privacy is vague and lacks nuance. SPD appears to use "plain view" as a proxy for "public area" without accounting for the multitude of scenarios in a public setting where there is a reasonable expectation of privacy. This raises concerns that SPD officers/detectives may be defining the plain view exception more broadly than permitted by law, especially as applied to a very intrusive technology.

To request a camera that will record in places where there is a reasonable expectation of privacy, a warrant or consent is required. The use of consent agreement in lieu of a warrant is concerning because of the power and information differential between police and members of the public, which could lead to a person consenting to the use of a camera system under duress (resulting in coerced consent).¹²⁷

Moreover, with both consent agreements and the use of reasonable suspicion, it's unclear how the scope of data collection is narrowly tailored to the investigation (e.g. where cameras are installed, what data they collect, how long cameras are installed for, etc.) to ensure both that more data is not collected than necessary for the investigation, and that improper data collection (inadvertent or otherwise) doesn't occur (including the capture by cameras of the activities of people who are not under investigation). In general, it's unclear from the SIR how the scope of data collection is constrained in contexts where a warrant is not required. The SIR also does not specify what proportion of camera use is for plain view recording versus recording in a setting where there is a reasonable expectation of privacy, and for the latter, what proportion of cameras are deployed on the basis of a warrant versus a consent agreement.

¹²⁶ Ibid.

¹²⁷ Strauss, "Reconstructing Consent."

While the SIR lists some of the event types or investigations that camera systems may be deployed for, it does not provide a comprehensive list, nor does it specify any policies that limit use cases. Thus it's unclear whether camera systems are used for serious offenses as well as more minor/petty offenses (e.g. graffiti, trespassing). The SIR also does not specify any criteria SPD applies to determining whether hidden cameras are necessary and appropriate in the use of an investigation. A UN Office of Drugs and Crime report on the current practice of electronic surveillance for investigating serious crime provides useful guidance. Interestingly, the SIR quotes from this report to extoll the benefits of cover camera surveillance,¹²⁸ but does not mention this guidance. The report states that law enforcement's use of electronic surveillance "should not be an investigative tool of first resort" and that "its use should be considered when other less intrusive means have proven ineffective or when there is no reasonable alternative to obtain crucial information or evidence." In particular, this report cites to four principals or policy considerations that should inform the decision to deploy electronic surveillance (including hidden cameras): (1) the use of this form of data gathering is necessary to obtain the evidence required; (2) that there are mechanisms in place to protect the confidentiality of the information obtained, including the privacy of third parties that are not the subject of the investigation; (3) that the process of evidence gathering is overseen by a judge "or independent other of a certain requisite and specified authority"; and (4) that the privacy infringement is proportionate to the seriousness of the suspected offense and the evidence that will be collected.¹²⁹ However, none of these principles or policy considerations are reflected in the SIR as part of SPD's calculus for deploying covert cameras or limiting their use.

II. *Specific Concerns*

a. **Lack of clarity about Camera System Vendor and Product Names, and the Number of Camera Systems SPD Owns.**

The SIR does not disclose vendor or product names of the camera systems it uses, or the number of camera systems it owns. At the 5/18/22 public engagement meeting, the SPD representative stated that SPD would not share information about vendor names because this information "could hinder

¹²⁸ SPD, "Camera Systems," 5.

¹²⁹ United Nations Office on Drugs and Crime, "Current Practices in Electronic Surveillance in the Investigation of Serious and Organized Crime," 2009, https://www.unodc.org/documents/organized-crime/Law-Enforcement/Electronic_surveillance.pdf.

investigative efforts.”¹³⁰ Without this information, it is challenging to know the capabilities of these camera systems and comprehensively assess their impacts on privacy rights and civil liberties, as well as SPD’s need for this technology.

- b. **Lack of Clarity About How SPD Defines the Plain View Exception.** The SIR does not define the plain view exception to the search warrant requirement. It appears to cast plain view settings as a proxy for “public area” without explaining that even in a public area, there are situations where people have a reasonable expectation of privacy under the law. This is concerning because it suggests SPD is interpreting the plain view exception more broadly than permitted by the law, especially as applied to a very intrusive technology.
- c. **Legitimacy of Consent-Based Use of Covert Camera Systems and Lack of Clarity on How Consent is Obtained.** It is unlikely that consent-based use of cover camera systems is legitimately consensual given the power and information asymmetry between police and members of the public, and particularly for communities that are disproportionately surveilled and policed. There are important racial differences in how individuals interact with law enforcement, and individuals may fear that refusing to give their consent to police will lead to deadly consequences. Additionally, the SIR does not describe the process by which officers obtain consent from witnesses or confidential informants. It is unclear if this process is standardized and if there is a separate consent process for confidential informants.
- d. **Lack of Clarity on How Many SPD Personnel Have Access to Camera Systems and How Cameras are Secured to Prevent Unauthorized Access.** The SIR indicates that camera systems are managed and maintained by SPD personnel within TESU but does not specify how many SPD personnel are trained and certified in the use of camera systems and/or otherwise have access to them. It also does not provide information about how cameras are secured to prevent unauthorized access, especially for body-worn cameras (the ones that can be concealed on a person), which are ostensibly

¹³⁰ City of Seattle IT Department, “Group 4b Surveillance Technologies Public Meeting #2.”

small and discrete and therefore can be surreptitiously moved around. The SIR states that “access to the systems/technology is limited to TESU personnel via password-protected login credentials” but that doesn’t account for how cameras are physically secured.¹³¹

- e. **Lack of Clarity on Safeguards in Place for Protecting Data from Unauthorized Access.** The SIR states that for fixed location cameras, data is stored directly on the device, and must be returned to TESU, which extracts the data onto a thumb drive or external hard drive and provides this copy to the requesting Officer/Detective for inclusion in the investigation file. The investigation file is kept on SPD’s password-protected server which is “limited to authorized detectives and identified personnel” but does not specify who qualifies as an “authorized detective and identified personnel.” Moreover, the SIR does not specify who has access to the data on the thumb drive or to the investigation file, or what the access controls are for the those. For fixed location cameras, recorded data are stored on an SPD-owned server and requesting officers or detectives must log into the server to extract the data. Similarly, the SIR does not specify who has access to the data on the server or what access control mechanisms are in place for the data. Without adequate access control mechanism, private data are at risk of being improperly accessed.
- f. **Lack of Clarity About Data Storage and Retention.** The SIR provides only a vague description of how extracted data are stored and for how long they are retained. It also does not specify what policies and practices govern data storage and retention on these mediums.
- g. **Lack of Clarity on How Often Cameras are Deployed.** The SIR does not indicate how often camera systems are deployed, or the proportion of camera deployments that are concealed on a person versus installed in a fixed location. It also does not provide information about what proportion of cameras installed in a setting where a reasonable expectation of privacy exists are deployed based on consent agreement versus a warrant. Without this information, it is difficult to adequately assess the

¹³¹ SPD, “Camera Systems,” 11.

impacts on privacy rights and civil liberties, as well as SPD's need for this technology.

- h. **Lack of Clarity and Transparency on What Other Tech Camera Systems Interface With.** The SIR does not specify which other tech, if any, SPD uses in conjunction with camera systems. Camera systems are capable of interfacing with a host of other technologies, such as automated license plate readers, facial recognition, or otherwise augmented with other forms of artificial intelligence.
- i. **Lack of Policy on Purpose of Use and Usage Limits.** The SIR does not explain all of the use cases for camera systems and does not include policies placing limits on its uses.
 - i. **Scope of data collection.** The SIR does not indicate how the scope of data collection is limited, especially in situations where the cameras are recording in plain view and all that is needed to deploy a camera system is reasonable suspicion, which is a very low bar.
 - ii. **Type of offense or investigation.** The SIR does not specify if there are limits to the type of events (e.g., First Amendment protected demonstrations) or offenses that SPD will investigate (e.g., petty crimes like graffiti and trespassing) using camera systems.
 - iii. **Tools camera systems interface with.** The SIR does not specify any limitations on the technology that camera systems can interface with.
- j. **Inadequate Oversight Policies.** The SIR states that TESU maintains logs of requests (including copies of request forms and/or warrants) and extractions that are available for audit.¹³² However, it is unclear if SPD has measures to prevent or detect the use of a covert camera system being used outside of the bounds of a case or legal investigation. It's also unclear how often audits on the use of camera systems are conducted and if there are any policies governing the frequency with which audits are done.

¹³² Ibid., 12

- k. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share data obtained from covert camera systems with outside entities¹³³ but does not address whether SPD maintains a record of those disclosures. Without a record of all disclosures, it is impossible to know who has received these sensitive data.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

- a. What are the manufacturers, vendors, model names and numbers of the fixed location cameras and body cameras?
- b. The SIR states: “Covert cameras may only be issued/deployed by TESU detectives. All TESU staff that deploy these cameras have received vendor training in their use.” Do the SPD personnel who request to use camera systems from TESU for their investigation, and who ostensibly are involved with the camera system operation, also receive training?
- c. What is the nature of the training that TESU personnel receive around camera systems?
 - i. How many hours of training do they receive? What does the training cover?
 - ii. Do they receive periodic updated training?
 - iii. Are they provided privacy training specific to camera systems?
 - iv. Is the training standardized and documented?
- d. Are camera systems capable of capturing and recording audio?
- e. How many fixed location cameras does SPD own? How many are currently deployed?
- f. Where are fixed location cameras deployed (i.e., what neighborhoods)?
- g. What is the distribution of fixed location cameras across these neighborhoods?
- h. How many fixed location cameras are currently deployed in locations where there is a “reasonable expectation of privacy”?
- i. Where are these deployed (e.g., what neighborhoods and blocks)?
- j. What is the distribution of fixed location cameras across these neighborhoods?

¹³³ Ibid, 14

- k. In general, where are the kinds of places that these cameras are covertly placed? Urban areas? Rural? Residential? Intersections? Etc.
- l. How long are they typically deployed for? Days? Months?
- m. How sophisticated are fixed location cameras? What capabilities do they have (e.g., can they zoom, pan, pivot)? Can they transmit video in real time? Is there a feed that can be monitored? Can the camera be remotely operated?
- n. How many covert body-worn cameras does SPD own?
- o. Are fixed location and body cameras used in conjunction with other tech?
- p. What safeguards/access control mechanisms are in place to protect data stored on the SPD server, camera device, investigative file or USB drive and limit access to authorized users only?
- q. What is the data retention policy for data on these various mediums?
- r. What are the policies governing when data must be deleted or otherwise purged from these mediums?
- s. How often are audits of covert camera use conducted? Is there a policy governing how often audits occur?
- t. When was the last time a request audit and deployment audit were conducted by APRS or OIG?

IV. *Recommendations for Regulation*

Pending answers to the questions above, we can make only preliminary recommendations for regulation of covert camera systems. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- The names of the manufacturers, vendors, model names, and model numbers are publicly disclosed.
- There is a policy defining the incident types for which SPD may use covert camera systems, and how they may be used.
- Covert camera systems are only used with authorization of a court-ordered warrant.
- The following are made publicly available: The frequency with which covert camera systems are used; the average and median length of time covert camera systems are deployed; how many camera systems SPD has; and how many people have access to the camera systems.

- There must be strong access controls (authentication, authorization, logging, etc.) in place for accessing data collected via covert camera systems, regardless of the medium they are stored on.
- There is a clear data retention policy.
- SPD should disclose/record to whom and under what circumstances camera system recordings are shared.
- There is adequate and standardized training for all personnel who use covert camera systems and the training includes a privacy component specific to the risks inherent to using covert camera systems as an investigative tool.
- There must be a detailed direct audit log of user actions with covert camera systems and SPD must produce a publicly available annual audit report about its use of the technology.

Tracking Devices

I. Background

Tracking devices are location-tracking tools that allow SPD to track vehicles electronically via interconnected hardware and software. Physical tracking devices are placed on or in a targeted vehicle and they report latitude and longitude coordinates on a pre-determined schedule that can be adjusted by users remotely. SPD uses a connected online portal that collects the information captured by the tracking device to map the locations and movement of vehicles.

Tracking devices raise serious privacy and civil liberties concerns because they can be used to comprehensively track and plot the movements of individual cars over time. These devices can be used to target individuals who visit sensitive places such as places of religious worship, protests, union halls, immigration clinics, or health centers. While SPD states that it uses tracking devices only with a warrant or after obtaining consent, data collected via these devices may be combined with other SPD data and analyzed with other invasive tools used by SPD such as GeoTime or IBM i2 iBase that can create very detailed, personalized maps and analyses of people's lives—even if they are not involved in a crime or an event being investigated.

Additionally, we have concerns about whether consent-based tracking is legitimately consensual given the power and information asymmetry between police and members of the public, and particularly for communities that are disproportionately surveilled and policed. There are important racial differences in how individuals interact with law

enforcement, and as noted by one scholar, “many African Americans, and undoubtedly other people of color, know that refusing to accede to the authority of the police, and even seemingly polite requests—can have deadly consequences.”¹³⁴

II. *Specific Concerns*

- a. **Lack of Information on What Specific Tracking Devices are Used.** The public has not been provided the names of the manufacturers and the specific model numbers and names of the tracking devices used by SPD. Without this information, it is difficult, if not impossible to meaningfully review all the functions and capabilities of the tools in use and provide recommendations on how each tool should be regulated.
- b. **Lack of Clarity on Usage Limitations and Types of Incidents for Which Tracking Devices are Used.** While the SIR states that officers/detectives will provide written consent and/or a court approved warrant for all vehicle-tracking technology deployments, it does not describe the incident types for which tracking devices are used. Especially with consent-based uses of tracking devices, it is unclear from the SIR how the use of tracking devices is constrained (whereas a judicial warrant would articulate formal parameters around data collection, such as time frame). Additionally, it is unclear whether SPD has a policy limiting the use of geolocation trackers to vehicles.
- c. **Legitimacy of Consent-Based Tracking and Lack of Clarity on How and From Whom Consent is Obtained.** It is unlikely that consent-based tracking is legitimately consensual given the power and information asymmetry between police and members of the public, and particularly for communities that are disproportionately surveilled and policed. There are important racial differences in how individuals interact with law enforcement, and individuals

¹³⁴ “Given this sad history, it can be presumed that at least for some persons of color, any police request for consent to search will be viewed as an unequivocal demand to search that is disobeyed or challenged only at significant risk of bodily harm.” Strauss, Marcy, “Reconstructing Consent.” *Journal of Criminal Law and Criminology*, vol. 92, no. 1, 2001, pp. 242-243.

may fear that refusing to give their consent to police will lead to deadly consequences. Additionally, the SIR does not describe the process by which officers obtain consent from witnesses or confidential informants. It is also unclear from whom consent is being sought—the vehicle owner, driver, and/or passengers. Lastly, it is unclear if this process is standardized.

- d. **Lack of Clarity About Data Storage, Safeguards, and Retention.** It is unclear whether the data collected via the physical tracking devices ever leaves SPD-owned equipment. The SIR states that “data is securely stored by the vehicle tracking technology vendor and will be transferred to the case investigator only via Seattle Police Department owned and authorized technology. At that time, vehicle tracking data collected by the tracking device is downloaded from the vendor software and resides only with the investigation file.”¹³⁵ It is unclear if the data is within the SPD network on-premises or if it flows to a vendor providing Software-as-a-Service. Additionally, the SIR does not state if any data retention policy exists. The SIR states that SPD deletes tracking device data from the software and hardware after the conclusion of a tracking schedule, but it does not state how long the data are kept after being moved to an investigation file.
- e. **Lack of Clarity on if TESU Personnel Training is Standardized and Documented.** The SIR states, “TESU personnel are trained by the vendor in the use of the hardware and software. When an Officer/Detective requests and deploys a tracking device from TESU, TESU personnel train the Officer/Detective in the tracker’s use.” It is unclear how the vendor trains the TESU personnel and how consistency in this training is ensured.
- f. **Lack of Clarity on Which SPD Personnel/Units and How Many Have Access to Tracking Devices.** The SIR states “Only authorized SPD users can access the vehicle tracking devices or the data while it resides in the system,” that “only SPD personnel involved in the investigation have

¹³⁵ Seattle Police Department, “2022 Surveillance Impact Report: Tracking Devices,” Accessed May 23, 2022, <https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20Tracking%20Devices.pdf>, 9.

access to this information, and “[o]nly Technical and Electronic Support Unit personnel have access to vehicle tracking equipment and services” but it is unclear which units and how many people in total have access to the tracking devices.

- g. **Lack of Clarity on Frequency of Usage of Tracking Devices.** It is unclear how many cases per year use tracking devices, how many deployments there are per year, and the average and median length of time tracking devices are deployed.
- h. **Inadequate Oversight Policies.** The SIR states that no formal audits exist for tracking device deployments. It is unclear if SPD has measures to prevent or detect the use of a tracking device being used outside of the confines of a case or legal investigation.
- i. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share data obtained from tracking devices with outside entities¹³⁶ but does not address whether SPD maintains a record of those disclosures. Without a record of all disclosures, it is impossible to know who has received these sensitive data.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

- a. What are the manufacturers, vendors, model numbers, and model names of the tracking devices in use by SPD?
- b. Is there any policy defining the incident types for which SPD may use tracking devices?
- c. What is the process of getting consent?
- d. Is the “online portal” hosted within the SPD network on-premise, or is it hosted on the vendor’s website?
- e. Does the data collected via the tracking device ever leave SPD-owned equipment?
- f. Are the trackers placed anywhere other than a vehicle?
- g. Is the TESU personnel training standardized and documented?

¹³⁶ Ibid., 10

- h. What is the retention period for data collected by tracking devices?
- i. How many cases per year use tracking devices?
- j. How many deployments of tracking devices are there per year?
- k. How long is the average and median length of time tracking devices are deployed?
- l. How many tracking devices does SPD have?
- m. How many people have access to SPD's location tracking devices?
- n. How many times has SPD deployed a tracking device on a vehicle either not owned by the suspect or owned by the suspect but also frequently used by other individuals?
- o. Are there measures in place that would prevent or detect the use of a tracking device outside the confines of a case or legal investigation?
- p. Have there been any audits of SPD's use of tracking devices? If so, when was the last audit and where can that audit report be found?

IV. *Recommendations for Regulation*

Pending answers to the questions above, we can make only preliminary recommendations for regulation of tracking devices. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- The names of the manufacturers, vendors, model names, and model numbers are publicly disclosed.
- There is a policy defining the incident types for which SPD may use tracking devices, and how they may be used.
- Tracking devices are only used with authorization of a court-ordered warrant.
- Data collected via the tracking device never leaves SPD-owned equipment.
- The following are made publicly available: The frequency with which tracking devices are used; the average and median length of time tracking devices are deployed; how many tracking devices SPD has; and how many people have access to the tracking devices.
- There must be strong access controls (authentication, authorization, logging, etc.) in place tracking devices.
- There is a clear data retention policy.
- SPD must disclose/record to whom and under what circumstances tracking device data are shared with third parties.

- There is adequate and standardized training for all personnel who use tracking devices and the training includes a privacy component specific to the risks inherent to using tracking devices as an investigative tool.
- There must be a detailed direct audit log of user actions with tracking devices and SPD must produce a publicly available annual audit report about its use of the technology.
- There must be measures in place to validate the accuracy of the data collected by tracking devices.

Remotely Operated Vehicles

I. Background

Remotely Operated Vehicles (ROVs) are unarmed remote controlled vehicles with mounted cameras. Three SPD units use ROVs: SWAT, Arson/Bomb, and Harbor. These units use ROVs to access areas that are potentially dangerous for personnel to physically enter. The ROVs operated by the SWAT and Arson/Bomb units are wheeled vehicles while the ROV operated by the Harbor unit are designed as submersible underwater vehicles.

There are 14 ROVs used in total.

- The SWAT unit has 7 ROVs. Two are manufactured by Robotex, four are manufactured by Recon Robotics, and one is manufactured by Tactical Electronics.
- The Arson/Bomb unit has 5 ROVs. They are manufactured by TeleRob, Andros, ICOR, Talon, and PointMan. Each of these ROVs has a camera which transmits back to the handheld control unit.
- The SPD Harbor unit has 2 submersible ROV units. One unit is manufactured by Deep Ocean Engineering and has onboard video and sonar recording capability. The other ROV is manufactured by Seabotix and has onboard video and sonar recording capability as well as two interchangeable remotely controlled articulated arms.

ROVs pose privacy and civil liberties concerns because they may be used to surveil members of the public via cameras and may be used to carry weapons and deliver lethal force. In 2016, Dallas police officers used a bomb disposal remote control vehicle armed with explosives to kill a

man.¹³⁷ Given that SPD's ROVs are equipped with cameras and remotely controlled arms, these technologies have the potential to cause serious harm to members of the public.

II. *Specific Concerns*

- a. **Lack of Clarity on Usage Limits.** While the SIR explains some use cases for ROVs, it does not include specific policies placing limits on its uses. For example, the SIR does not describe any policies in place prohibiting the use of ROVs to surveil members of the public or to carry or deploy weapons.
- b. **Lack of Clarity on if There are Auditable Logs of the Deployment of ROVs.** The SIR does not clearly answer what processes are required prior to each use or access to ROVs, such as a notification, or check-in, or check-out of the equipment. The SIR only states, "Authorized members of the SPD SWAT, Arson/Bomb, and Harbor units are given training in the appropriate use and application of these ROVs."¹³⁸ Lack of a check-in/check-out procedure is concerning because there may be no logs that could be audited of the deployment of the ROVs.
- c. **Lack of Clarity on the Number of Cases for Which ROVs are Used.** The SIR does not make clear for how many cases per year the SWAT, Arson/Bomb, and Harbor units use ROVs, and the average and median length of time ROVs are deployed.
- d. **Lack of Clarity on Whether SPD has Ever Used ROVs to Deploy Weapons.** Some ROVs can support recoilless disrupters that can shoot diverse types of projectiles which are intended to remotely disable an improved explosive device (IED), i.e., a bomb. However, some ROVs, such as the SWORDS TALON ROV, support a diverse range of weapons.¹³⁹ A 12-gauge shotgun can also be mounted onto

¹³⁷ Sidner, Sara and Mallory Simon, "How Robot, Explosives Took Out Dallas Sniper in Unprecedented Way," *CNN*, <https://www.cnn.com/2016/07/12/us/dallas-police-robot-c4-explosives/index.html>.

¹³⁸ Seattle Police Department, "2022 Surveillance Impact Report: Remotely Operated Vehicles (ROVs)," Accessed May 30, 2022, <https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20ROVs.pdf>, p. 6.

¹³⁹ Qinetiq, "Multi-Mission Explosive Ordnance Disposal Robot," <https://www.qinetiq.com/en/what-we-do/services-and-products/talon-medium-sized-tactical-robot>

the Pointman ROV.¹⁴⁰ The purpose of mounting weapons onto ROVs would be to harm or kill humans—not to disable an IED. SPD uses both TALON and Pointman ROVs and it is unclear whether SPD has ever used ROVs to deploy weapons or if SPD has a policy prohibiting the use of weapons with ROVs.

- e. **Inadequate Data Storage, Safeguards, and Retention.** The SIR states that Harbor unit personnel delete the data on the hard drives inside the ROV only periodically when the software informs the users that it is nearing capacity.¹⁴¹ It is unclear why there is no policy requiring the deletion of recorded data from the Harbor unit's ROVs when a deployment is finished. It is also unclear whether the statement that no images or data are stored or retained by ROVs used by SWAT and Arson/Bomb units also applies to SPD-provided cell phones, personal cell phones, or remote controllers and tablets that may also support recording data.
- f. **Lack of Clarity on if ROV Training is Standardized and Documented.** The SIR states, "Authorized members of for the SPD SWAT, Arson/Bomb, and Harbor units are given training in the appropriate use and application of these ROVs. Unit commanders are responsible to ensure usage of the technology falls within the appropriate usage."¹⁴² It is unclear if there is a standardized and documented training process.
- g. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share data obtained from ROVs with outside entities¹⁴³ but does not address whether SPD maintains a record of those disclosures. Without a record of all disclosures, it is impossible to know who has received these sensitive data.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

- Is there any policy defining usage limits for SPD's use of ROVs?
- Is there a procedure for SPD personnel to get access to the ROVs?

¹⁴⁰ i-HLS, "Pointman Tactical Robot, Surveillance Systems Assist Law Enforcement in Urban, Security Ops," *Defense Update*, 2013, Accessed June 1, 2022, https://defense-update.com/20130504_new-tools-for-border-security.html

¹⁴¹ SPD, "ROVs," 8.

¹⁴² SPD, "ROVs," 6.

¹⁴³ SPD, "ROVs," 10.

- Is there an auditable log of the deployment of ROVs?
- For how many cases per year does the SWAT unit use ROVs?
- For how many cases per year does the Arson/Bomb unit use ROVs?
- For how many cases per year does the Harbor unit use ROVs?
- Is the training for members of the SPD SWAT, Arson/Bomb, and Harbor units standardized?
- Is there a policy requiring the deletion of recorded data from the Harbor unit's ROVs when a deployment is finished?
- Is there a policy prohibiting SPD personnel from recording data using SPD-provided cell phones or personal cell phones, or remote controllers or tablets that may be connected to the ROVs wirelessly?
- Has SPD ever used an ROV with weapons or for lethal force?
- Have there been any audits of SPD's use of ROVs? If so, when was the last audit and where can that audit report be found?

IV. *Recommendations for Regulation*

Pending answers to the questions above, we can make only preliminary recommendations for regulation of ROVs. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- There is a policy defining the incident types for which SPD may use ROVs, how they may be used, and what the usage limits are.
- A court ordered warrant is required to use ROV to surveil any members of the public. There is a prohibition on the use of ROVs to deploy weapons.
- There must be strong access controls (authentication, authorization, logging, etc.) in place for ROVs.
- Any data collected via ROVs that is not needed for an investigation is deleted immediately.
- Data collected via ROVs never leaves SPD-owned equipment.
- The following are made publicly available: The frequency with which ROVs are used; the average and median length of time ROVs are deployed; and how many people have access to the tracking devices.
- SPD must disclose/record to whom and under what circumstances ROV data are shared with third parties.
- There is adequate and standardized training for all personnel who use ROVs and the training includes a privacy component specific to the risks inherent to using ROVs as an investigative tool.

- There must be a detailed direct audit log of user actions with ROVs and SPD must produce a publicly available annual audit report about its use of the technology.

Crash Data Retrieval

I. Background

Crash Data Retrieval (CDR) tools are used to reconstruct traffic collisions by connecting to a vehicle's Event Data Recorder (EDR) and translating the raw EDR data to a PDF format readable report. Nearly all passenger vehicles sold in the US since 2013 have an onboard EDR, which automatically records technical information during a critical event such as a collision. While the type of data collected by an EDR varies by manufacturer, the types of data that are recorded include GPS, throttle, brake pedal position, steering angle, and speed. After airbags are deployed, these data are saved permanently and can only be accessed through the vehicle's onboard diagnostics port.

CDR tools pose privacy and civil liberties concerns because EDRs can be used to track people's locations and record other sensitive information without their knowledge. In 2011, OnStar, a company that uses EDRs to track vehicle location and other operational data, changed its user contract terminology without notifying customers, in order to track people's driving habits and sell the information to third parties.¹⁴⁴ While the policy was eventually reversed due to public pressure, entities such as auto insurance companies may use increasingly powerful tracking systems to monitor policyholders, and that data may be accessed by law enforcement.

The SIR's lack of clarity on SPD's policies and the specific CDR tools in use raises concerns about SPD's use of this technology.

II. Specific Concerns

- Lack of Information on What Specific CDR tools are Used.** The SIR does not provide the names of the manufacturers and the specific model numbers and names of the CDRs used by SPD. Without this information, it is difficult, if not impossible, to meaningfully review all the

¹⁴⁴ David Kravets, "OnStar Tracks Your Car Even When You Cancel Service," *Wired*, 2011, Accessed June 1, 2022, <https://www.wired.com/2011/09/onstar-tracks-you/>

functions and capabilities of the tools in use and provide recommendations on how each tool should be regulated.

- b. **Lack of Clarity on Usage Limits.** While the SIR explains the general use case for CDR tools, it does not describe if SPD seeks to use CDR tools to gather EDR data every time an accident occurs, regardless of whether a citation has been issued or a crime has occurred.
- c. **Lack of Clarity on the Breadth of Warrants to Collect Vehicle Data.** It is unclear if the warrants used by SPD specify that only EDR data are collected or if these warrants permit SPD to extract any data from the vehicle, including information from a car's system such as phone contacts and location history from past trip navigations.
- d. **Lack of Clarity on if There are Audits on the Deployment of CDR Tools.** It is unclear if SPD has logs of CDR use and if there has been an audit of SPD's usage of CDR tools.
- e. **Lack of Clarity on the Number of Cases for Which CDR Tools are Used.** The SIR does not make clear for how many cases per year CDR tools are used, and the average and median length of time CDR tools are deployed.
- f. **Lack of Clarity About Disclosures to Other Agencies.** The SIR states that SPD may share data obtained from CDR tools with outside entities¹⁴⁵ but does not address whether SPD maintains a record of those disclosures. Without a record of all disclosures, it is impossible to know who has received these sensitive data.

III. *Outstanding Questions that Must be Addressed in the Final SIR*

- h. What are the manufacturers, vendors, model numbers, and model names of the CDR tools in use by SPD?
- i. Is there any policy defining usage limits for SPD's use of CDR tools?
- j. Are the warrants to get access to vehicle data after a crash limited to EDR data?
- k. Are the audits on SPD's use of CDR tools?
- l. For how many cases per year does SPD use CDR tools?

¹⁴⁵ Seattle Police Department, "2022 Surveillance Impact Report: Crash Data Retrieval Tool," Accessed May 30, 2022, <https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20%20Crash%20Data%20Retrieval.pdf>, 9.

IV. Recommendations for Regulation

Pending answers to the questions above, we can make only preliminary recommendations for regulation of CDR tools. SPD should adopt clearer and enforceable policies that ensure, at the minimum, the following:

- The names of the manufacturers, vendors, model names, and model numbers are publicly disclosed.
- There is a policy defining the incident types for which SPD may use CDR tools, how they may be used, and what the usage limits are.
- There is policy requiring warrants sought for CDR use are narrowly tailored to only extract EDR data, and no other data from the vehicle.
- There must be strong access controls (authentication, authorization, logging, etc.) in place for CDR data.
- The following are made publicly available: The frequency with which CDR tools are used; the average and median length of time CDR tools are deployed; and how many people have access to the CDR tools.
- SPD must disclose/record to whom and under what circumstances CDR data are shared with third parties.
- There must be a detailed direct audit log of user actions with CDR tools and SPD must produce a publicly available annual audit report about its use of the technology.

Sincerely,

Jennifer Lee
Technology and Liberty Project Manager

Mina Barahimi Martin
Policy Analyst



June 02, 2022

Seattle Information Technology
700 5th Ave, Suite 2700
Seattle, WA 98104

RE: Upturn's Comments on "Computer, cellphone and mobile device extraction tools" in Group 4b Surveillance Technologies

On behalf of Upturn, I write to offer our comments on one technology included in Group 4b of the Seattle Surveillance Ordinance implementation process.

Upturn is a nonprofit organization based in Washington, D.C. that works in partnership with many of the nation's leading civil rights and public interest organizations to promote equity and justice in the design, governance, and use of technology. One of Upturn's priorities is to ensure that technology does not exacerbate or entrench mass incarceration and racial inequity in the criminal legal system.

We write to comment specifically on Seattle Police Department's (SPD) use of mobile device forensic tools (MDFTs) — tools that allow police to extract and search a cellphone for every text, photo, piece of location data, online search history, and more.¹ In 2020, Upturn published *Mass Extraction: The Widespread Power of U.S. Law Enforcement to Search Mobile Phones* (attached). Based on more than 110 public records requests, more than 12,000 pages of documents, and more than two years of research, this report is the most comprehensive examination of law enforcement's use of mobile device forensic tools to date.² Among the report's findings is that more than 2,000 law enforcement agencies have

¹ Under Group 4b the Seattle Surveillance Ordinance process describes these tools as "Computer, cellphone and mobile device extraction tools." We use the terminology "mobile device forensic tools" as we believe it is most technically accurate — regardless, this is the same technology that the Seattle Police Department uses.

² Our records requests asked law enforcement agencies for three common records: purchase records, records of use (describing in what cases and how often law enforcement agencies use mobile device forensic tools), and policies governing use. We supplemented our research through publicly available reporting; various open databases from city, county, and state governments; federal grantmaking databases; and GovSpend, a database of government contracts and purchase orders. In order to assess the technical capabilities of current mobile device forensic tools, we examined technical manuals, software release notes, marketing materials, webinars, and digital forensics blog posts and forums. We also visited the office of one of the few public defenders in the US with these forensic tools (and forensic staff) in-house.



purchased these tools in all 50 states and the District of Columbia. State and local law enforcement agencies have performed hundreds of thousands of cellphone extractions since 2015, often without a warrant. Few departments have detailed policies governing when and how officers can use this technology. The report also documents the existing technical capabilities of today's mobile device forensic tools, finding that the tools provide sweeping access to personal information on a phone. *Mass Extraction* documents a dangerous expansion in law enforcement's investigatory power.

In these comments, we highlight four issues with law enforcement use of mobile device forensic tools. We believe that MDFTs are simply too powerful in the hands of law enforcement and should not be used. Recognizing that MDFTs are already in widespread use across the country, we conclude with recommendations that we believe can, in the short term, reduce the use and harm of MDFTs.

1. Mobile device forensic tools are designed to be invasive. They are a dangerous expansion of law enforcement's investigatory power.

Every day, law enforcement agencies across the country search thousands of cellphones using MDFTs. MDFTs are a powerful technology that allows police to extract a full copy of data from a cellphone — all emails, texts, photos, location data, app data, and more — which can then be programmatically searched. As one expert puts it, with the amount of sensitive information stored on smartphones today, the tools provide a “window into the soul.”³

Mobile device forensics is typically a two-step process: data extraction, then analysis. MDFTs help law enforcement accomplish both. An MDFT is a computer program and its supplemental equipment (*e.g.*, cables and external storage) that can copy and analyze data from a cellphone or other mobile device. The software can run on a regular desktop computer, or on a dedicated device like a tablet or a “kiosk” computer. These tools are sold by a range of companies, including Cellebrite, Grayshift, MSAB, Magnet Forensics, OpenText (formerly Guidance Software), Oxygen Forensics, and AccessData.

³ C.M. “Mike” Adams, “Digital Forensics: Window Into the Soul,” *Forensic*, June 10, 2019, *available at* <https://www.forensicmag.com/518341-Digital-Forensics-Window-Into-the-Soul/>.



According to records obtained from Seattle's Police Department, SPD has spent *at least* \$240,000 on MDFTs from vendors including Cellebrite, MSAB, Magnet Forensics, and Grayshift.⁴

Modern cellphones are a convenient combination of many tools: they're phones, cameras, notebooks, diaries, navigation devices, web browsers, and more. Smartphones centralize patterns of life on a single device with seemingly endless storage. There has never been an easier, more centralized way to access troves of personal data about individuals. MDFTs allow law enforcement to access all of this data and more, often without individuals understanding how much information they are handing over.

Our technical analysis of how MDFTs work and their capabilities surfaces three key points:

1. **MDFTs are designed to copy all of the data commonly found on a cellphone.** Mobile device forensic tools are designed to extract the maximum amount of information possible. This includes data like contacts, photos, videos, saved passwords, GPS records, phone usage records, and even "deleted" data. A "logical extraction" of the phone extracts data as it is presented on the phone to the user, while a "physical extraction" of the phone allows for law enforcement to download data bit by bit from the phone, offering more information to be later reconstructed and analyzed.
2. **MDFTs make it easy for law enforcement to analyze and search data copied from phones.** A range of features help law enforcement quickly sift through gigabytes of data — a task that would otherwise require significantly more labor. MDFTs can chronologically sort all information on the phone, use location data to show every single place a person has been on a map, and use face recognition to search every image on the phone for a specific person. The tools allow for keyword searches of all data, sorting by file type regardless of its location on the phone (*e.g.*, all of the images on a phone, regardless where they came from) and even create networked graphs to show social relationships.
3. **MDFTs can circumvent most security features in order to copy data.** MDFTs exploit the security vulnerabilities or design flaws present in a wide range of

⁴ This number comes from public records requests and is listed in the Appendix of *Mass Extraction*. <https://www.upturn.org/work/mass-extraction/#>. This total is an undercount, given that our public records project concluded in 2020 and SPD has likely renewed MDFT licenses and purchased new MDFTs in 2020, 2021, and 2022.



phones. Even in instances where full forensic access is difficult due to security features like strong password protection, mobile device forensic tools can often still extract meaningful data from phones. MDFTs take advantage of the fact that, in order to balance convenience and security, phones don't actually encrypt all data on a device. When all else fails, vendors offer "advanced services" in which the phone is sent to a vendor's lab for intensive unlocking attempts.

In 2018, the Seattle PD purchased 20 such "actions" for \$33,000,⁵ and email records show them using Cellebrite to unlock various iPhones within days or weeks.⁶ For example, SPD sent Cellebrite an iPhone X with an unknown 6-digit passcode in August 2018: Cellebrite received it on August 24, began processing on August 28, finished processing on September 12, and shipped it back the same day. Cellebrite Premium allows law enforcement to bring these advanced unlocking capabilities in-house for \$75,000 to \$150,000, based on the frequency of use.⁷

Ultimately, MDFTs offer law enforcement a powerful window into almost all data stored on — or accessible from — a cellphone, including substantial amounts of data that regular users cannot see. Data extracted by an MDFT can be stored indefinitely and repeatedly searched. This would be like allowing law enforcement to repeatedly and indefinitely search a person's home, without that person knowing. MDFTs provide sweeping access to personal information on a phone, enabling "an extent of surveillance that in earlier times would have been prohibitively expensive."⁸ In many circumstances, this access can be disproportionately invasive compared to the scope of evidence being sought and poses an alarming challenge to existing Fourth Amendment protections.

2. MDFTs are used as a general purpose investigative tool, even when the offense has no digital component.

The emergence of MDFTs represents a dangerous expansion in law enforcement's investigatory powers. In 2011, only 35% of Americans owned a smartphone.⁹ Today, it's at

⁵ See Seattle Police Department Purchase & Supply Request, https://beta.documentcloud.org/documents/20394507-installment_101.

⁶ See Seattle Police Department, Cellebrite Advanced Services emails, https://beta.documentcloud.org/documents/20394508-installment_51.

⁷ Cellebrite, "Premium access to all iOS and high-end Android devices," available at https://cf-media.cellebrite.com/wp-content/uploads/2020/07/ProductOverview_CellebritePremium.pdf.

⁸ *United States v. Garcia*, 474 F.3d 994, 998 (7th Cir. 2007).

⁹ Pew Research Center, "Mobile Fact Sheet," June 12, 2019, available at <https://www.pewresearch.org/internet/fact-sheet/mobile/>.



least 81% of Americans.¹⁰ Moreover, many Americans — especially people of color and people with lower incomes — rely solely on their cellphones to connect to the internet.¹¹ For law enforcement, “[m]obile phones remain the most frequently used and most important digital source for investigation.”¹² Seattle PD remarked in their own impact assessment that roughly 63% of investigations include digital evidence as part of the investigation.¹³ While that percentage may seem high, if anything, it is a significant undercount of how often law enforcement agencies use MDFTs.

The records we’ve obtained demonstrate that law enforcement agencies use MDFTs as an all-purpose investigative tool for a broad and growing array of offenses. Law enforcement use MDFTs to investigate not only cases involving major harm, but also for graffiti, shoplifting, marijuana possession, prostitution, vandalism, car crashes, parole violations, petty theft, public intoxication, and the full gamut of drug-related offenses. Through our public records request, we received documentation from SPD that they conduct phone searches for offenses spanning from murder to robbery, violation of pretrial conditions of release, gun possession, and drug charges. This contradicts SPD’s own claim that these tools are used for “collecting evidence related to serious and/or violent criminal activity.”¹⁴ Given how routine these searches are today, together with racist policing policies and practices, it’s likely that these technologies disparately affect and are used against communities of color.

3. There are virtually no policies in place governing the use of these powerful tools.

In response to our records request, SPD did not provide us with any specific policies governing the use of MDFTs. Instead, SPD only provided general policies on searches, search warrants, and an irrelevant policy on locating a cellphone during an emergency. SPD’s impact assessment only states that officers rely on warrants or consent for searches,

¹⁰ *Id.* (Noting 96% own a cellphone of some kind.)

¹¹ Camille Ryan, U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau, “Computer and Internet Use in the United States: 2016,” American Community Survey Reports, August 2018; Jamie M. Lewis, *Handheld Device Ownership: Reducing the Digital Divide?*, March 2017, <https://www.census.gov/library/working-papers/2017/demo/SEHSD-WP2017-04.html>.

¹² Cellebrite Annual Industry Trend Survey 2019: Law Enforcement, at 3.

¹³ 2022 Surveillance Impact Report — Computer, Cellphone, and Mobile Device Extraction Tools, Seattle Police Department, at 4, available at

<https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20Computer%2C%20QCellphone%2C%20%26%20Mobile%20Device%20Extraction%20Tools.pdf>

¹⁴ *Id.*, 5.



and does not describe any other policies to safeguard people's rights.¹⁵ Indeed, SPD says that "[a]s it relates to extraction tools themselves, use is authorized, and constrained, only by consent or search warrant."¹⁶ Section 4 of this testimony will describe in greater detail the profound limitations of consent and search warrants as measures to "safeguard people's rights."

As described in these comments already, MDFTs are some of the most powerful tools at law enforcement's disposal; and based on the available evidence, SPD has no policy to monitor, track, control, oversee, or even attempt to account for their use of these tools. This surveillance technology oversight process is an opportunity for the council to remedy this. Council must act to curb SPD's use of these tools and to protect the rights of Seattle residents.

Policies governing MDFTs should have specific requirements for how law enforcement write warrants and search phones, in order to guard against overbroad searches that violate peoples' rights. The Fourth Amendment requires warrants to describe with particularity the places to be searched and the things to be seized. This "particularity requirement" was designed to protect against "general warrants," such that law enforcement could not indiscriminately rummage through a person's property. While police departments' policies obtained by Upturn acknowledge the need to have a sound legal basis to search a phone (via consent or search warrant), few provide more clarity or direction beyond this general acknowledgement. When law enforcement downloads an entire copy of a person's phone, they violate the particularity requirement and leave individuals vulnerable to overbroad searches of their private activities, communications, and thoughts.¹⁷

In order for a cellphone search warrant to abide by the requirements of the Fourth Amendment, it must, at a minimum:

- Specify the particular items of evidence to be searched and seized from the phone;
- Ensure that the nexus between each category of information on a cellphone — such as texts, photographs, or emails — and the alleged criminal activity is specific and clear (cellphone search warrants must be based on more than the fact that a defendant possesses a phone);

¹⁵ *Id.*

¹⁶ *Id.*, 15.

¹⁷ See an extended discussion of this in Section 4.



- Strictly limit search authorization to the narrowest time period for which probable cause has been properly established;
- Strictly prohibit a search of “any and all data,” or of a laundry list of data on a phone; and
- Forswear reliance upon the plain view exception and general statements that say because digital data might possibly be disguised or manipulated, law enforcement must be able to search the entirety of a cellphone.

A specific cellphone search warrant policy should ideally describe these minimum features.

Further, SPD’s current policies have no clear limits on data retention, or how that data may be used beyond the scope of an immediate investigation. Unlike a physical search of someone’s home, once a copy of a person’s phone has been downloaded, law enforcement can hold onto and repeatedly search that copy forever. Absent specific policies or laws that require notifying someone that their phone has been searched, it would be impossible for those under investigation to know of — let alone challenge — situations where law enforcement continues to rifle through previously extracted data for new or unrelated investigations.

Additionally, without specific prohibitions, law enforcement could copy data from someone’s phone — say, their contact list — and add that information into a far-reaching police surveillance database that may harm an individual and their contacts for years to come. SPD might share information with other law enforcement agencies in the King County area, the state of Washington, or with other states and the federal government.¹⁸ Law enforcement should also not be able to indiscriminately use cloud data extraction tools, which can access information that is not locally stored on the phone (SPD also has no policies for these tools).

There are a handful of state laws that do prescribe evidence retention periods specifically for digital evidence obtained from cellphones. For example, New Mexico’s recently enacted Electronic Communications Privacy Act requires that “any information obtained through the execution of the warrant that is unrelated to the objective of the warrant be destroyed within thirty days after the information is seized and be not subject to further review, use

¹⁸ The Wisconsin Supreme Court recently held that cellphone evidence obtained from a consent search in one jurisdiction can be shared with other law enforcement agencies pursuing unrelated investigations, without needing new legal authorization. See *State v. Burch*, 2021 WI 68, 961 N.W.2d 314 (Wis. 2021).



or disclosure.”¹⁹ The City of Seattle, too, should adopt meaningful limitations on retention of digital evidence.

4. Law enforcement regularly use MDFTs without a warrant – but even with warrants, little is done to minimize the harm of invasive searches.

In 2014, the Supreme Court held in *Riley v. California* that in order to search a cellphone, police must get a warrant.²⁰ However, courts have long held that “consent searches” are an exception to the Fourth Amendment’s warrant requirement. Records Upturn obtained show that, for some agencies, law enforcement regularly rely on a person’s consent as the legal basis to search cellphones. For the cellphone searches SPD documented and conducted between 2017 and 2019, one-third were consent searches.

However, “consent searches” are inherently coercive. Due to power and knowledge imbalances between residents and law enforcement, there is enormous disincentive to refuse to give consent, and it is much worse for people of color who are under threat of police violence. In fact, many states ban consent searches at traffic stops, and California²¹ and New Jersey²² have banned consent searches for minors, in order to address this racialized power imbalance. A recent study designed “specifically to examine the psychology of consent searches” highlights the problems in relying on a so-called “reasonable person” to adjudicate the lawfulness of consent searches.²³ Participants were brought into a laboratory and presented with a “highly invasive request: to allow an experimenter unsupervised access to their unlocked smartphone.”²⁴ More than 97% of participants handed their phone over to be searched when requested — even though only

¹⁹ See <https://nmlgis.gov/Sessions/19%20Regular/final/SB0199.pdf>. Similarly, California’s Electronic Communications Privacy Act allows judges to, at their discretion, “require that any information obtained through the execution of the warrant or order that is unrelated to the objective of the warrant be destroyed as soon as feasible after the termination of the current investigation and any related investigations or proceedings.” See https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB178.

²⁰ *Riley v. California*, 573 U.S. 373 (2014).

²¹ See John M. Broder, “California Ending Use of Minor Traffic Stops as Search Pretext,” *New York Times*, Feb. 28, 2003, available at <https://www.nytimes.com/2003/02/28/us/california-ending-use-of-minor-traffic-stops-as-search-pretext.html> and California Senate Bill 203.

²² See https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB203

²³ See Routine Automobile Consent Searches are Illegal in New Jersey. <https://www.lsnjlaw.org/Criminal-Charges-and-Convictions/Motor-Vehicle-Laws/Pages/Ban-Routine-Automobile-Consent-Searches.aspx>

²⁴ Roseanna Sommers, Vanessa K. Bohns, *The Voluntariness of Voluntary Consent: Consent Searches and the Psychology of Compliance*, 128 Yale L. J. 1962 (2019).

²⁵ *Id.*, 1980.



14.1% of a separate group of observers said that a “reasonable person” would hand over their phone in such a situation.²⁵ This study reveals that there is a profound, “systematic bias whereby neutral third parties view consent as more voluntary, and refusal easier, than actors experience it to be.”²⁶

Additionally, MDFTs are not well understood by the public, and they are able to extract much more data than most people would assume. Many people may give consent to police to see their text messages or another specific category of data with the assumption that police will simply look at the phone manually, while police actually perform full extractions using MDFTs and retain data indefinitely. Consent searches of cellphones are especially egregious as people do not know the extent of the information they are giving away, and how that information will be searched and retained.

Warrants are not much better. As part of Upturn’s public records research, we obtained and studied hundreds of search warrants that authorized law enforcement to search cellphones using MDFTs. Many of these warrants authorized a search of “any and all data” on a cellphone. Others authorized a search of a laundry list of effectively every type of data one could plausibly find on a cellphone. Others authorized a “full extensive download and/or search of the [phone] to include all compartments, and items within the electronic devices that may contain contraband or evidence of the crime, and the data stored within said devices.” Still others authorized a search of a cellphone for “evidence related to this [narcotics offense] and other criminal offenses.” And for many, regardless of the precise words used, the nexus between a phone’s data and the alleged offense was tenuous. Repeatedly, across the country, we saw search warrants that authorized an unlimited, unrestricted search of a cellphone.

Relatedly, few policies provide guidance on what examiners should do if they encounter potential evidence of another crime that is not detailed in the initial search warrant. Using a search warrant to look for digital evidence of one potential crime, only to then search for digital evidence of a different crime is unconstitutional. Without clear and enforced guidance, law enforcement could go on a “fishing expedition” in search of evidence of any crime, far beyond the original justification for a search. We observed only two policies that provided any guidance on this point.²⁷

²⁵ *Id.*, at 1980.

²⁶ *Id.*, at 2019.

²⁷ For example, the Santa Clara District Attorney’s Office advises that if an “[e]xaminer discovers evidence of another crime(s) that is outside the scope of the submitted search warrant, the Examiner may continue the examination for items named in the warrant. The Examiner should contact the submitting agency and/or the prosecutor handling the case for guidance before conducting any searches for evidence not



The risk of overbroad searches is especially worrying given the fact that it's nearly impossible for those outside of law enforcement — such as defense lawyers — to repeat the steps that a forensic examiner took and to audit the scope of a search. A handful of agency policies do require examiners to document how a search was conducted, but the level of documentation required is still unlikely to allow a defense lawyer to meaningfully audit a search.

Legal scholars and courts have wrestled with the problems of overbroad digital searches for decades.²⁸ It's especially striking, given the prominence of these legal debates, that law enforcement agencies including Seattle Police Department have largely allowed officers and forensic examiners to search cellphones without detailed policies and with few constraints. SPD asserts that their cellphone searches are restricted to consent searches and warrants²⁹ — in practice, this means that residents of Seattle have no protections against overbroad violations of their rights.

named in the original warrant." See Santa Clara District Attorney's Office, Santa Clara County Crime Laboratory Computer Forensic Standard Operating Procedures, <https://beta.documentcloud.org/documents/20394644-2019-08-19-pra-resp-email-att-standard-operating-procedures-rev-26-112820181>. As another example, the San Diego Police Department says that if "an examiner discovers evidence of another crime(s) that is outside the scope of the submitted legal authority, the examiner will notify the assigned prosecutor and/or submitting investigator of the discovery and nature of any evidence of other crime(s) outside the scope of the original search warrant." See San Diego Police Department, Forensic Technology Unit Manual, <https://beta.documentcloud.org/documents/20392583-forensic-technology-unit-manual-082218-current>.

²⁸ See, e.g., Paul Ohm, *Massive Hard Drives, General Warrants, and the Power of Magistrate Judges*, 97 Va. L. Rev. In Brief 1 (2011); James Saylor, *Computers As Castles: Preventing the Plain View Doctrine From Becoming a Vehicle for Overbroad Digital Searches*, 79 Ford. L. Rev. 2809 (2011); Eric Yeager, *Looking for Trouble: An Exploration of How to Regulate Digital Searches*, 66 Vand. L. Rev. 685 (2013); Andrew D. Huynh, *What Comes after Get a Warrant: Balancing Particularity and Practicality in Mobile Search Warrants Post-Riley*, 101 Cornell L. Rev. 187 (2015); Adam Gershowitz, *The Post-Riley Search Warrant: Search Protocols and Particularity in cellphone Searches*, 69 Vand. L. Rev. 585 (2016); Michael Mestitz, *Unpacking Digital Containers: Extending Riley's Reasoning to Digital Files and Subfolders*, 69 Stan. L. Rev. 321 (2017); Sara J. Dennis, *Regulating Search Warrant Execution Procedure for Stored Electronic Communications*, 86 Ford. L. Rev. 2993 (2018); Laura Donohue, *Customs, Immigration, and Rights: Constitutional Limits on Electronic Border Searches*, 128 Yale L. J. Forum 961 (2019); Laurent Sacharoff, *The Fourth Amendment Inventory as a Check on Digital Searches*, 105 Iowa L. Rev. 1643 (2020); Cameron Cantrell, *A Dignitary Fourth Amendment Framework and Its Usefulness for Mobile Phone Searches*, 25 Va. J.L. & Tech 242 (2022).

²⁹ 2022 Surveillance Impact Report — Computer, Cellphone, and Mobile Device Extraction Tools, Seattle Police, available at <https://www.seattle.gov/documents/Departments/Tech/Privacy/DRAFT%20SIR%20-%20Computer%2C%20Cellphone%2C%20%26%20Mobile%20Device%20Extraction%20Tools.pdf>



5. MDFTs are too powerful in the hands of law enforcement. Recognizing that they are already in widespread use across the country, several policies must be enacted to limit how MDFTs expand law enforcement's investigatory power.

We believe that MDFTs are simply too powerful in the hands of law enforcement and should not be used. But recognizing that MDFTs are already in widespread use across the country, we offer a set of preliminary recommendations that we believe can, in the short-term, reduce the use and harm of MDFTs in Seattle:

- **Ban the use of consent searches of mobile devices.** Police consent searches in any context are troubling, but the power and information asymmetries of cellphone consent searches are egregious and unfixable. Accordingly, policymakers should ban the use of consent searches of cellphones.³⁰

As explained in Section 4, the doctrine underlying “consent searches” is a legal fiction.³¹ When courts pretend that “consent searches” are voluntary, they fail to account for the important racial differences in how individuals interact with law enforcement.³² As one scholar noted, “many African Americans, and undoubtedly other people of color, know that refusing to accede to the authority of the police, and even seemingly polite requests—can have deadly consequences.”³³ Given the extreme power asymmetries, it’s a “simple truism that many people, if not most, will always feel coerced by police ‘requests’ to search.”³⁴ Further, most of the

³⁰ California’s Racial and Identity Profiling Advisory Board recently suggested that policymakers should “should consider prohibiting consent searches of cell phones.” See Racial & Identity Profiling Advisory Board, Racial & Identity Profiling Advisory Board Annual Report 2022, 112 (January 2022).

³¹ Ric Simmons, *Not “Voluntary” but Still Reasonable: A New Paradigm for Understanding the Consent Searches Doctrine*, 80 Ind. L.J. 773, 775 (2005) (“Over 90% of warrantless police searches are accomplished through the use of the consent exception to the Fourth Amendment.”)

³² Tracey Maclin, “*Black and Blue Encounters*” *Some Preliminary Thoughts About Fourth Amendment Seizures: Should Race Matter?*, 26 Val. U. L. Rev. 243, 248 (1991). (“Instead of acknowledging the reality that exists on the street, the Court hides behind a legal fiction. The Court constructs Fourth Amendment principles assuming that there is an average, hypothetical person who interacts with the police officers. This notion . . . ignores the real world that police officers and black men live in.”)

³³ Marcy Strauss, *Reconstructing Consent*, 92 J. Crim. L. & Criminology 211, 242-243 (2001). (“Given this sad history, it can be presumed that at least for some persons of color, any police request for consent to search will be viewed as an unequivocal demand to search that is disobeyed or challenged only at significant risk of bodily harm.”) Indeed, as another scholar argued, the “consent search doctrine is the handmaiden of racial profiling.” See George C. Thomas III, *Terrorism, Race and a New Approach to Consent Searches*, 73 Miss. L.J. 525, 542 (2003).

³⁴ Marcy Strauss, *Reconstructing Consent*, 92 J. Crim. L. & Criminology 211, 221. (2001.)



“consent to search” forms Upturn obtained from law enforcement agencies don’t clearly specify how they will search the phone, the tools they’ll use, or the extent of the search.³⁵

Some believe that officers should provide warnings to ensure consent searches are voluntary. Such warnings would inform the subject of the search that they are being asked to voluntarily, knowingly, and intelligently consent to a search. But warnings are not enough. One study found that participants who received a warning about their right to refuse a consent search were just as likely to comply with the search.³⁶ This is also consistent with an earlier analysis of data collected from the Ohio Highway Patrol on motor vehicle stops, which found no decrease in consent rates after a law requiring warnings was introduced.³⁷

Banning consent searches is not a new suggestion.³⁸ Nor is it a perfect solution, as it’s easy for law enforcement to obtain a search warrant. But banning consent searches of cellphones can help limit police discretion, limit the coercive power of police, and minimize the amount of information that can be collected from people

³⁵ The Denver Police Department’s consent form mentions that devices may be submitted “to the computer forensic laboratory for copying and examination.” See <https://beta.documentcloud.org/documents/20390003-consent-for-search-of-cell-phone-tablet>. The Tampa Police Department’s mentions that “this search may require the temporary utilization of software and/or hardware.” See <https://beta.documentcloud.org/documents/20393153-tpd-form-142-e-consent-to-search-electronic-media-devices-english>. The Colorado State Patrol’s consent form mentions that they can “submit the electronic device described below to a computer/electronic forensic examiner . . . who has specialized training necessary to conduct such an examination.” See <https://beta.documentcloud.org/documents/20391059-csp-343-consent-to-search-electronic-device>. The Illinois State Police’s consent to search form mentions that their search “may include the duplication/imaging and complete forensic analysis of any data contained within the internal, external, and/or removable storage media of this device.” See https://beta.documentcloud.org/documents/20391550-img_0001.

³⁶ Roseanna Sommers, Vanessa K. Bohns, *The Voluntariness of Voluntary Consent: Consent Searches and the Psychology of Compliance*, 128 Yale L. J. 1962, 2000 (2019).

³⁷ Illya Lichtenberg, *Miranda in Ohio: The Effects of Robinette on the “Voluntary” Waiver of Fourth Amendment Rights*, 44 HOW. L.J. 349 (2001) (Examined highway stops in Ohio between 1987 and 1997. During that time period, the state introduced a law requiring police to inform motorists that they were free to leave before requesting consent. Lichtenberg found no decrease in consent rates among motorists before versus after the reform was adopted.)

³⁸ For example, the New Jersey Supreme Court outlawed consent searches during traffic stops where no reasonable suspicion exists. The California Highway Patrol banned its use of consent searches as part of a broader class action lawsuit brought because of racial profiling. And in Rhode Island, by law, “[n]o operator or owner-passenger of a motor vehicle shall be requested to consent to a search by a law enforcement officer of his or her motor vehicle, that is stopped solely for a traffic violation, unless there exists reasonable suspicion or probable cause of criminal activity.”



under investigation. Seattle City Council should ban consent searches of cellphones.

- **Require easy-to-understand audit logs.** Seattle City Council should require that mobile device forensic tools used by law enforcement have clear recordkeeping functions, specifically, detailed audit logs and automatic screen recording. With such logs, judges and others could understand the precise steps that law enforcement took when extracting and examining a phone, and public defenders would be better equipped to challenge those steps. Audit logs and screen recordings would document a chronological record of all interactions that law enforcement had with the software, such as how they browsed through the data, what search queries they used, and what data they could have seen. This information would be stored in the MDFT itself as a log that is easily shareable with auditors, judges, and defenders.

There is an extreme power and resource imbalance between public defenders and law enforcement in general,³⁹ and especially when it comes to digital evidence. Few public defenders have access to MDFTs. Instead, defenders are forced to examine forensic reports that are thousands of pages long and “easily navigable only if you have a forensic company’s proprietary software”—which they can rarely afford.⁴⁰ Further, defenders and judges often have no way of knowing whether law enforcement actually stayed within the bounds of a search warrant for a phone. For courts, simply taking law enforcement’s word for it should be insufficient — lying

³⁹ Research has demonstrated that fewer than 30 percent of county-based and 21 percent of state-based public defender offices have enough attorneys to adequately handle their caseloads. See Bureau of Justice Statistics, Lynn Langton and Donald Farole Jr., County Based and Local Public Defender Offices, 2007 (2010), 8, <https://www.bjs.gov/content/pub/pdf/clpdo07.pdf>; Bureau of Justice Statistics, Lynn Langton and Donald Farole Jr., State Public Defender Programs, 2007 (2010), 12, <https://bjs.ojp.gov/content/pub/pdf/spdp07.pdf>. Also see Justice Policy Institute, System Overload: The costs of Under-Resourcing Public Defense, 2011, available at http://www.justicepolicy.org/uploads/justicepolicy/documents/system_overload_final.pdf; American Bar Association, Gideon’s Broken Promise: America’s Continuing Quest for Equal Justice (2004); Bryan Furst, A Fair Fight: Achieving Indigent Defense Resource Parity, Brennan Center, September 9, 2019, available at https://www.brennancenter.org/sites/default/files/2019-09/Report_A%20Fair%20Fight.pdf.
⁴⁰ Kashmir Hill, “Imagine Being on Trial. With Exonerating Evidence Trapped on Your Phone.” New York Times, November 22, 2019, available at <https://www.nytimes.com/2019/11/22/business/law-enforcement-public-defender-technology-gap.html>.



under oath is endemic to the institution of American policing.⁴¹ Thus, audit logs would be especially helpful for defenders trying to suppress evidence that was obtained illegally.

This recommendation even comports with principles articulated by law enforcement associations, like the Association of Chief Police Officers, which has said that “[a]n audit trail . . . of all processes applied to digital evidence should be created and preserved. An independent third party should be able to examine those processes and achieve the same result.”⁴² Seattle Police Department even wrote that “all device utilization is documented and **subject to audit** by the Office of Inspector General and the federal monitor at any time.”⁴³ Having these logs ensure that actual, detailed audits are possible.

The critical caveat is that audit logging is unlikely to be an effective tool for broad transparency and police accountability. This tool will not necessarily improve police behavior, but on a case-by-case basis, this tool could give public defenders

⁴¹ See, e.g., Irving Younger, “The Perjury Routine,” *The Nation*, May 8, 1967; Myron R. Orfield, *The Exclusionary Rule and Deterrence: An Empirical Study of Chicago Narcotics Officers*, 54 Chi. L. Rev. 1016 (1987); Commission to Investigate Allegations of Police Corruption and the Anti-Corruption Procedures of the Police Department, City of New York, Commission Report (1994) at 38; Stanley Fisher, “*Just the Facts, Ma’am*: Lying and the Omission of Exculpatory Evidence in Police Reports,” 28 N. Eng. L. Rev. (1993); Joseph Goldstein, “‘Testilying’ by Police: A Stubborn Problem,” *The New York Times*, March 18, 2018, available at <https://www.nytimes.com/2018/03/18/nyregion/testilying-police-perjury-new-york.html>; Peter Keane, “Why cops lie,” *San Francisco Chronicle*, March 15, 2011; Michael Oliver Foley, *Police Perjury: A Factorial Survey*, (2000); Samuel Gross, et al., *Government Misconduct and Convicting the Innocent: The Role of Prosecutors, Police and Other Law Enforcement*, National Registry of Exoneration, September 1, 2020, available at https://www.law.umich.edu/special/exoneration/Documents/Government_Misconduct_and_Convicting_the_Innocent.pdf.

⁴² Association of Chief Police Officers, *APCO Good Practice Guide for Computer based Electronic Evidence*, March 2012, available at https://www.digital-detective.net/digital-forensics-documents/ACPO_Good_Practice_Guide_for_Digital_Evidence_v5.pdf. Also see: Rick Ayers, Sam Brothers, Wayne Jansen, *Guidelines on Mobile Device Forensics*, NIST Special Publication 800-101, Revision 1, National Institute of Standards and Technology, May 2014, available at <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-101r1.pdf>. (noting that “[p]roper documentation is essential in providing individuals the ability to re-create the process from beginning to end.”); Scientific Working Group on Digital Evidence, *SWGDE Best Practices for Mobile Phone Forensics*, Feb. 11, 2013, available at <https://drive.google.com/open?id=18dwENQNztbEaOG9GLSUEdXZxeDEeUc-3> (noting that documentation should include “sufficient detail to enable another examiner, competent in the same area of expertise, to repeat the findings independently.”).

⁴³ Computer, Cellphone, and Mobile Device Extraction Tools. Seattle Police Department. <https://www.seattle.gov/documents/Departments/Tech/Privacy/Computer%2C%20Cellphone%2C%20%26%20Mobile%20Data%20Extraction%20One%20Pager.pdf>



and judges a significantly clearer window into the nature and extent of cellphone searches.

- **Enact robust data deletion and sealing requirements.** Seattle City Council should require law enforcement to delete any extracted cellphone data that is not related to the objective of the warrant within thirty days of the date the information is obtained.⁴⁴ In addition, for cases that result in a conviction, data that was deemed relevant should be sealed at the conclusion of the case. For other cases, where charges are dismissed or do not result in conviction, all data should be deleted, relevant or not. Data deemed relevant in one case should never be used for general intelligence purposes or used in unrelated cases.

In the absence of clear law or policy, law enforcement could use personal information like contact lists, photos, and location data to fuel harmful police surveillance systems. This is true not only for the person whose phone was searched, but also for anyone they have used their phone to contact — friends, family, colleagues, or even new acquaintances. Cellphone searches are unlike traditional seizures because law enforcement extracts all of the data on the device and only after this seizure do they search for case-relevant information. Maintaining information outside the scope of the warrant is akin to law enforcement maintaining the ability to indefinitely and limitlessly search a home.

- **Require public logging of SPD use of MDFTs.** The City of Seattle should require public reporting and logging of how law enforcement use mobile device forensic tools. These records should be released at least monthly, as this would allow more immediate access to information by advocates, policymakers, and the public seeking to understand the capabilities and practices of their police agency. Agencies should additionally release annual reports on overall department usage.

These records should include aggregate information such as:

- How many phones were searched in a given time period.
- Whether those searches were by consent (though consent searches should be banned), or through a warrant.
- Warrant numbers associated with searches, when applicable.
- The types of offenses being investigated.

⁴⁴ The only exception should be for exculpatory information.



- How often MDFTs led to successful data extractions.
- Explanations for any failed extractions.
- Which tools were used for extraction and analysis, and their version numbers.

Conclusion

Mobile device forensic tools are far too powerful to be in the hands of law enforcement. Phones centralize more information about a person than previously possible and MDFTs are designed to extract the maximum amount of information from them. The racial disparities in who police target for searches and surveillance mean that Black and brown people living in Seattle are far more likely to be harmed by cellphone searches. That these tools have no real limits or policies governing their use is untenable.

Short of an outright ban of MDFTs, there are many ways to immediately reduce the harm these tools currently create: Audit logs, clear public logging, data deletion, and sealing can reduce the scale at which MDFTs create and exacerbate harm. Banning consent searches in general, and especially for cellphones, would protect individuals from coercive searches by police and from unwittingly turning over essentially all of their personal information.

I hope that this information is useful to the Council and Surveillance Working Group. Thank you for the opportunity to comment on these technologies.

Sincerely,

A handwritten signature in black ink, appearing to read "Urmila Janardan".

Urmila Janardan
Policy Analyst, Upturn
urmila@upturn.org

Appendix E: Questions and Department Responses

Question	Response
Which GeoTime products does SPD use? Is that GeoTime desktop, GeoTime Glimpse, GeoTime Enterprise, and/or GeoTime Live?	2 Geotime Desktop 7 Geotime Glimpse
Could you share how often GeoTime is deployed? For example, how many times a week it's deployed and for how many investigations a week?	Unknown.
Does SPD use the social media analysis functionality that GeoTime provides? And if so, what measures are used to protect non-targeted people that might be included in that social media data, such as people who may have liked or commented on a video or a picture from a person that might be incorporated somehow into this GeoTime utility.	No

Item 6.5 in the sir doesn't really talk about the accuracy of the data that is inputted into GeoTime. For example, if there was a software bug in a cell tower resulting in inaccurate timestamps, duplication, or missing records, then the call detail records which are then inputted by SPD into GeoTime would have inaccuracies and basically assumes that all sources of their data that they input into GeoTime are always perfectly functioning and never inaccurate. Then this potential result in the wrong individuals being implicated in a crime through the use of GeoTime kind of analyzing that and displaying it visually to you. So is it correct then that SPD just expects that there's is no validations and they expect all sources to be perfectly accurate?

Is GeoTime used from the Prosecution side as evidence? Or it would not be because you say the call data record is is the evidence?

Does GeoTime interface with [distorted], CrimeView, or any other predictive policing technologies?

Is that something that would be added to the SIR if they don't interface?

No, the investigation itself is the validation. The accuracy of the cell site data is irrelevant to the existence of GeoTime. We would need to validate that independently as part of the investigation. The accuracy of the input there is independently identified by the investigator through the process of investigation. Much like any other interest, such as a witness statement, or other information gathered during an investigation.

(There was major echo at this time; very difficult to understand with accuracy the question or the response)

Well, because it's subject to discovery, the map that is created by geo time is included in the investigative file which is subject to discovery in court -- but the data points included are also part of the investigative file...

No.

Well, I, I think we need to be careful about making sure we don't require the search to list everything. It doesn't to interface with. The server requires us to. Talk about how we use it.

Is there any policy defining the incident types for which SPD may use GeoTime? Specify that it needs to be serious or violent offenses or some level that's warranting the use of the tool, as opposed to less serious offenses like [you know] trespassing or graffiti or some other petty crime. Regarding GeoTime again; because GeoTime allows for the mapping of data that not related to the person under investigation, it enables SPD to cast a pretty broad net that could ensnare innocent people, exposing their private information. Could you share what sort of safeguards and protections SPD puts in place to protect the information of people who are not actually under investigation?

Does interface with I think we need to be careful about starting to require a list of everything. It doesn't because we'll be here until the end of time. So we can. Look into that, but I don't think it's going to be a tenable option here.

Well, that's governed by the fact that others don't have time to apply it to, like this to a, what? You would consider a lower level of.

Well, as it relates to any other investigation, the safeguards I know you mentioned expose, it's not exposing it to anybody that didn't already have access to that. Information it's all still contained internally within and to ensure that they're not improperly accused the investigative process, determines their involvement and dismisses them out of the investigation if appropriate. So, there is no additional exposure in the use of geo time because it all stays secured within spd.

Appendix F: All Comments Received from Members of the Public

ID: 114044275297

Submitted Through: SurveyMonkey

Date: 6/2/2022 11:16:20 PM

Which surveillance technology that is currently open for public comment, do you wish to comment on?

SPD: Geotime

What concerns, if any, do you have about the use of this technology?

GeoTime is capable of analyzing a huge amount of data. The draft SIR mentions cell phone records and call site information (section 2.3) and extraction tools (section 3.2) but does not include a list of the data sources used by GeoTime. Without this information, it is impossible to understand the surveillance impact of GeoTime. There is no information available about how accurate GeoTime's analyses are. Algorithms used to detect patterns or visualize data are very likely to introduce errors as well as racial biases and other distortions. Section 6.5 highlights that GeoTime does not check the correctness of the data that it uses, but does not discuss any other checks on the correctness of the data. Surveillance technologies are typically used disproportionately to target people of color, LGBTQ+ people, unhoused people, and activists. Unless there's clear policies and procedures in place, and officers have been given sufficient training, that's very likely to be the case with these technologies as well. Third-party vendors and other governmental entities may misuse the data shared with them.

What value, if any, do you see in the use of this technology?

Visualization tools, when accurate and used appropriately, can make it easier to see and understand important information related to investigations. This potential value needs to be weighed against the possibility of inaccuracies and biases in the analyses leading to false conclusions, and the potential misuse of the data.

Do you have any other comments?

What is the complete list of data sources that SPD uses as inputs for GeoTime? What are the contractual agreements with the GeoTime's vendor? What purposes does the agreement with GeoTime's vendor allow them to use the data for? For example, they can presumably use it to diagnose problems with their software. Can they also use it to improve their product? Develop future products? "Legitimate business purposes"? Are there any technical safeguards in place to prevent GeoTime's vendors misusing the data? Has SPD audited GeoTime's vendor to ensure that they are not misusing the data? Is there an Algorithmic Impact Report or algorithmic audit for GeoTime? What restrictions are in place on the entities listed in 6.1 further sharing GeoTime's analyses or the discrete pieces of data analyzed by GeoTime? Does SPD or any of the entities listed in 6.1 share GeoTime's analyses, or the discrete pieces of data analyzed by GeoTime, with Fusion Centers? Does training for GeoTime users specifically cover the possibilities of inaccurate data and discriminatory uses? How detailed is the information currently being tracked about how GeoTime is used? Is there enough information there to identify discriminatory patterns, and whether incorrect data has been used in analyses? What percentage of uses of GeoTime have been audited by the Office of the Inspector General? Do these audits specifically look at discriminatory uses and correctness of the data and analyses? Have any of these reports been published? What percentage of uses of GeoTime have been audited by the Federal Monitor? Do these audits specifically look at discriminatory uses, and correctness of the data and analyses? Have any of these reports been published? What percentage of uses of GeoTime have been audited by SPD's Intelligence and Analysis Section? Do these audits specifically look at discriminatory uses and correctness of the data and analyses? Have any of these reports been published?

ID: 114044216901

Submitted Through: SurveyMonkey

Date: 6/2/2022 8:33:16 PM

Which surveillance technology that is currently open for public comment, do you wish to comment on?

SPD: Geotime

What concerns, if any, do you have about the use of this technology?

THIS TECHNOLOGY IS SO FUCKING CREEPY. THIS IS WHAT YOU ARE SPENDING TAXPAYER MONEY ON INSTEAD OF FUNDING ACTUALLY USEFUL PUBLIC SERVICES? SHAME ON YOU

What value, if any, do you see in the use of this technology?

THIS TECHNOLOGY IS SO FUCKING CREEPY. THIS IS WHAT YOU ARE SPENDING TAXPAYER MONEY ON INSTEAD OF FUNDING ACTUALLY USEFUL PUBLIC SERVICES? SHAME ON YOU

Do you have any other comments?

THIS TECHNOLOGY IS SO FUCKING CREEPY. THIS IS WHAT YOU ARE SPENDING TAXPAYER MONEY ON INSTEAD OF FUNDING ACTUALLY USEFUL PUBLIC SERVICES? SHAME ON YOU

ID: 114043229977

Submitted Through: SurveyMonkey

Date: 6/1/2022 5:21:15 PM

Which surveillance technology that is currently open for public comment, do you wish to comment on?

SPD: Geotime

What concerns, if any, do you have about the use of this technology?

1) Due to the potentially vast range of data uploaded, people unrelated to a crime may have their data in GeoTime, which is highly privacy-violating. This is especially true with the social media data, since numerous un-involved people may like/comment/be-tagged-in a post and then be scooped up and uploaded into GeoTime. This risk exists partially because nothing prohibits SPD from using GeoTime's Social Media Analysis feature. 2a) Data errors or algorithmic bias (i.e. night shift workers flagged as drug dealers) resulting in the wrong person being implicated. For example, if there was a software bug in a cell tower resulting inaccurate timestamps or duplication/missing records; then the Call Detail Record (CDR) would have inaccuracies. That could potentially result in the wrong individual(s) being implicated in a crime, leading to a potential life or death encounter with the police afterwards. 2b) Moreover, it's Unknown if/how an individual can correct inaccuracies. 3) SPD using GeoTime to assist an agency outside WA in investigating a crime that is not illegal in WA as it relates to healthcare. Taxpayer money should not be used by SPD to assist/facilitate an investigation of legal healthcare activities in WA state, namely those of reproductive rights and gender-affirming care. SPD should only (at most) ever investigate crimes that are illegal in WA. 4) Nothing prohibits the use of GeoTime by SPD for the purposes of predictive policing. Given the highly biased nature of predictive policing and the high likelihood for it endangering and ruining the lives of innocent people, predictive policing should be banned. SPD should only (at most) be investigating crimes that have already occurred. 5) Nothing officially restricts SPD's use of GeoTime to only violent offenses. Given how privacy-invasive the use of this tool can be, it's use should be restricted to only the worst of the worst offenses. 6) Lack of sufficient data privacy protections for users whose data is uploaded into GeoTime by SPD (due to weak protections for people's Personally Identifiable Information (PII) per the GeoTime Privacy Policy). This is especially concerning given that SPD uses GeoTime Glimpse which entails people's PII leaving the SPD network and being uploaded to GeoTime over the Internet. 7) Item 4.1 in the SIR says "No information is saved inside the GeoTime tool." This seems (at a minimum) technically incomplete/inaccurate information. SPD uses GeoTime Glimpse which entails uploading data to Uncharted's servers. It might be the case that Uncharted doesn't intentionally conduct any long-term storage or backups of that data (though even that is not stated in the SIR); but at a minimum the data will be stored on Uncharted's servers for some length of time (regardless of whether that is volatile or durable storage). So how long does Uncharted retain the data? Until the SPD user logs out of GeoTime? Nightly deletion? Some other timing? This is important information not articulated in the SIR due to it glossing over of the actual technical implementation. Moreover, if Uncharted changed their implementation tomorrow and did start intentionally retaining data uploaded into GeoTime Glimpse for long-term durable storage; then nothing from the City would provide safeguards or protections in that case. 8) Lack of clarity regarding what specific security controls are in place between the GeoTime Desktop vs GeoTime Glimpse. That is, what ensures equal security controls (authentication, authorization, logging, encryption, etc) are in place regardless of whether the data in GeoTime is used purely locally vs uploaded over the Internet? If a security policy is changed internally for SPD infrastructure/software, then what ensures that same level of security policy change is also applied to Internet resources like GeoTime Glimpse? 9) It's unclear if the GeoTime products that SPD uses have detailed audit logs. The GeoTime website does not describe any such logs and the SIR doesn't describe any audit logs either (only who has

authority to conduct an audit). If the tools don't have robust audit logs, then it would be impossible to conduct an accurate audit of SPD's use of GeoTime. Are there logs or other ways for auditing the steps SPD applied to the data/visualization? Are there logs of which data fields were uploaded into GeoTime from which cases and from which internal data sources? If there are logs, then are they stored in a secure manner that is tamper-evident? 10) Visualizations created by SPD in GeoTime being uploaded/shared with one or more Fusion Centers. This is specially concerning when that data was for a case where charges were dropped or the person wasn't convicted; or the data was shared before the data gets validated via the court proceedings process (so the data might be so poor in quality to not be admissible in court but is already shared with a Fusion Center in that unvalidated state). It would also be concerning if such data was shared without a warrant. 11) Potentially disproportionate use of this technology. That is, does SPD equally use GeoTime when investigating the same type of case or is more likely be used when the suspect is of a certain race/age/gender/etc? 12) Item 3.2 in the SIR states that "The data analyzed using GeoTime is obtained by investigators under the execution of court ordered warrants..." This is misleading and incomplete because SPD said they also will use publicly available data, not just data via warrants. 13) Item 2.2 in the SIR says "A multitude of scholarly studies have shown that the GeoTime technology is a highly effective technique in the analysis of complex geographical information with temporal context." But the first 2 papers listed are both written by employees of the company that makes GeoTime (which at that time was called Oculus Info Inc); and the third paper isn't even about "GeoTime" the product, instead it's about "Geo-Time" (as in geographic time series data modelling) for geological purposes, not law enforcement. So the sources SPD provided are either irrelevant or biased with strong conflicts of interest. Moreover, when you do look for un-biased relevant scholarly work about GeoTime, you find a paper like this titled "The social consequences of a mass surveillance measure: What happens when we become the 'others'?" which was published in the "International Journal of Law, Crime and Justice" and states, "In addition, the UK Metropolitan Police Department recently purchased Geotime surveillance software, which can track users' digital movements by connecting information from mobile phones, IP network logs, social networking sites, satellite navigation equipment, and financial transactions ... Not only is the invasion of one's privacy great but there is also a risk that such data-mining might investigate the wrong individual, especially since the criteria used to mine data remain unclear" (<https://doi.org/10.1016/j.ijlcrj.2011.08.002>).

What value, if any, do you see in the use of this technology?

Any value must be weighed against its risks. The risks here are quite substantial. Given that plus the low likelihood for City Council adding the safeguards the public has requested, I don't think the value is useful enough. There must be sufficient safeguards in place before I'd consider this tool anything but simply dangerous.

Do you have any other comments?

ID: 114034987129

Submitted Through: SurveyMonkey

Date: 5/20/2022 2:20:16 PM

Which surveillance technology that is currently open for public comment, do you wish to comment on?

SPD: Geotime

What concerns, if any, do you have about the use of this technology?

What value, if any, do you see in the use of this technology?

Do you have any other comments?

1. How many SPD workstations have GeoTime installed on them? 2. How many people have access to GeoTime? 3. How many people have access to GeoTime through the online internet accessible portal? 4. What are all the devices the internet accessible portal is accessible from? Is it accessible from personnel's mobile devices? 5. How often is GeoTime deployed? How many times a week is it deployed/for how many investigations a week is it deployed? 6. What is the criteria for requesting deployment, if any? Can any officer/detective determine based on their own discretion that deployment of GeoTime is necessary/would be fruitful for their investigation? Or are there barriers, like supervisor approval? 7. 4.1: "GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files." a. Besides data obtained via MDFTs, what are all the types of data that are typically manually input by investigators into this tech for a single investigation? b. Relatedly, what other tech does GeoTime interface with? 8. 3.2—SPD states: "The data analyzed using GeoTime is obtained by investigators under the execution of court ordered warrants, including data from cellular providers and from data extracted from mobile devices." This is contradictory to what SPD stated in the SIR on MDFTs, which indicates that extraction tools can be deployed with "consent" from the device owner, and therefore without a signed court warrant. What other kinds of data inputted into GeoTime are obtained without a warrant? 9. What data outputs are created by GeoTime? 10. 5.2—"SPD's Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time...SPD conducts periodic reviews of audit logs and they are available for review at any time..." What does "periodic" mean? When was the last time the APRS conducted an audit of the system? When was the last time SPD conducted a review of audit logs? 11. 7.3—SPD states: "GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files"; and 7.4—SPD states: "The public may express concern over the consolidation of so much information about individuals, but all of the data that is input into GeoTime is already available to investigators." Given the consolidation of vast amounts of data, ostensibly into locally stored investigation files, what safeguards or measures are in place to protect the data in those files (is the data encrypted? What are the control access mechanisms?) 12. What measures are in place to verify the accuracy of GeoTime's analysis? 13. What is the nature of the training that personnel receive on GeoTime? a. How many hours of training do they receive? What does the training cover? b. Do they receive periodic updated training? c. Are they provided privacy training specific to the privacy risks associated with GeoTime?

ID: 114034394349

Submitted Through: SurveyMonkey

Date: 5/19/2022 9:35:59 PM

Which surveillance technology that is currently open for public comment, do you wish to comment on?

SPD: Geotime

What concerns, if any, do you have about the use of this technology?

What value, if any, do you see in the use of this technology?

Do you have any other comments?

A) What are all of SPD's data sources to GeoTime? B) Once the files generated by GeoTime are downloaded out of GeoTime, which groups of SPD employees have access to those files? Do SPD employees not directly involved with a case have access to those files? C) Does GeoTime log what actions each user takes inside the application? Are there actually any logs? If so, what types of things do they include (are they only error logs, or are they only logs of sign-ins, or do they log features used/data imported/exported/etc? D) The answer to item 8.1 in the GeoTime SIR only covered PRA requests, but the answer to item 6.1 listed six other entities that could receive data from GeoTime along with two other groups being researchers & Federal or State entities. So does SPD record all of those disclosures as well?

Email Comment

Questions:

- Is any of the data from Geo Time shared or accessed by the Fusion Center(s)? If so, does the Fusion Center access Seattle Police Department data, and would that be via a warrant required for other law enforcement agencies to access data collected by SPD?

Key Concerns:

- It's unclear whether the deployment of this technology is disproportionately used against marginalized and minority individuals and communities.
- This technology takes in a huge amount of data in order to connect data points in relation to police searches and crime investigations, but many uninvolved people's data may be included. If the technology is not taking in data selectively, this technology is posed to violate the rights to privacy of both targeted and non-targeted people.
- Data sucked into GeoTime can be used as evidence in court and to obtain warrants, but the public has very little information or transparency about its data collection, data retention, and any other technologies that may be used alongside GeoTime, and what other entities may have access.
- Data collection is not perfect, clocks can be wrong, cell towers can be buggy, words, concepts, and cultural or situated references may be misconstrued via algorithmic bias. What happens if the data is incorrect or inaccurately processed?
- What recourse does an accused person, or any member of the public whose data is sucked into GeoTime, have to correct the record or clarify incorrect data?
- If the data from GeoTime stored in an investigation file can be requested from SPD by other agencies, including agencies in other states; that data could be used to pursue arrest or conviction of any uterus-bearing person planning to come here for care, or having already accessed abortion healthcare, gender-affirming care, and/or any other healthcare tests/records in WA state.

Recommendations:

- **Scoping** – City Council should prohibit the use of GeoTime's Social Media Analysis.
- **Predictive policing** – City Council prohibit the use of GeoTime for the purpose of predictive policing, and prohibit using GeoTime with other predictive policing tools.
- **Scoping** – City Council should restrict the use of GeoTime to only cases involving an event type flagged in the system as a violent and/or serious offense involving a non-property crime.

- **Data lifecycle governance** – City Council should prohibit the storing data on Uncharted servers.
- **Contractual & Inventory** – SPD should make the contract or customer agreement and the list of related products that they are integrating, or plan to integrate, with GeoTime available to the public.
- **Data sharing** – City Council should prohibit sharing data or facilitating an investigation of a crime in another state when that crime is not illegal in WA state and is related to accessing healthcare.
- **Regulation and Transparency Report** – City Council should require that for as long as GeoTime (or similar) technology is used, records of its use must be registered with the city and compiled into monthly transparency reports, accessible on the City’s website, to include the following details: make and model or version of the technology, reason for its use, dates and times used, number of parties’ and devices’ and types and sources of data that was accessed, whether the use of GeoTime (or similarly capable tech) resulted in an arrest or conviction, whether and how often its use generated a new lead unrelated to the original purpose of its use; thoroughly reported demographic data regarding the targets of its use; whether the extraction data is/was shared with or uploaded to any other software program, entity, company, agency or person, outside of the SPD officer employing the technology; and, the name of such shared with (excluding of course, from the publicly available report any specific names of other officers, but retaining those records pursuant to public records requests law as well as internal records for auditing purposes).

Email Comment

QUESTIONS

Is any data from this tool shared with Fusion Centers?

CONCERNS

Due to the potentially vast range of data uploaded, people unrelated to a crime may have their data in GeoTime (privacy-violating).

Data errors (i.e. cell tower software bug) or algorithmic bias (i.e. night shift workers flagged as drug dealers) resulting in the wrong person being implicated.

Unknown if/how an individual can correct inaccuracies.

Potentially disproportionate use of this technology.

SPD using GeoTime to assist an agency outside WA in investigating a crime that is not illegal in WA as it relates to healthcare, especially reproductive rights & gender-affirming care.

RECOMMENDATIONS

Restrict use of these tools to only violent offenses.

Prohibit the use of Social Media Analysis & predictive policing.

Prohibit assisting an investigation of a crime in another state when that crime is not illegal in WA state & is related to healthcare.

Prohibit SPD from storing data on Uncharted Software's servers.

Post the contract(s) publicly.

Require a monthly transparency report covering: tool name & version, data sources, offense, whether the extraction resulted in an arrest/conviction, whether new unrelated leads generated, targets' demographic data, & where/who data was shared with.

Email Comment

concerns:

I understand that police may see value in using technology that seems to make their jobs easier, however; this tool has very serious rights-evading and privacy-invading implications for suspects, bystanders, AND completely unrelated persons.

What I'd like the Seattle City Council to consider (recommendations):

1. Please disallow SPD from using the social media capabilities of this tool. This is incredibly invasive, and violates far too many people's privacy in the pursuit of evidence.
2. Please ban the use of GeoTime alongside any and all biometric tools, including face, gait, and voice recognition, as well as all other AI software.
3. Please ban the use of GeoTime alongside any and all predictive policing tools.
4. Please strictly limit the use of GeoTime to violent crimes that involve other living beings. This tool is extremely invasive and should not be used for property crimes or petty offenses.
5. Please set clear perimeters with regular and strict audits logs for who may use this tool, and why, ensuring that any officers who do not fully complete such reporting are unable to use the tech.
6. Please ensure that any person who uses GeoTime for any personal matter or nefarious purpose may be held personally liable for such activity.
7. Please work to ban the use of GeoTime entirely, and up until that time, please require that the use of GeoTime be reported in a monthly transparency report - available on the city's website, to include the demographics of the target(s).
- 8, Please mandate that SPD
and any other agency or department borrowing this technology, collect detailed enough demographic information on the use of this tool to enable transparency audits by the city that can identify disproportionate use.

Email Comment

concerns:

I understand that police may see value in using technology that seems to make their jobs easier, however; this tool has very serious rights-evading and privacy-invading implications for suspects, bystanders, AND completely unrelated persons.

What I'd like the Seattle City Council to consider (recommendations):

1. Please disallow SPD from using the social media capabilities of this tool. This is incredibly invasive, and violates far too many people's privacy in the pursuit of evidence.
2. Please ban the use of GeoTime alongside any and all biometric tools, including face, gait, and voice recognition, as well as all other AI software.
3. Please ban the use of GeoTime alongside any and all predictive policing tools.
4. Please strictly limit the use of GeoTime to violent crimes that involve other living beings. This tool is extremely invasive and should not be used for property crimes or petty offenses.
5. Please set clear perimeters with regular and strict audits logs for who may use this tool, and why, ensuring that any officers who do not fully complete such reporting are unable to use the tech.
6. Please ensure that any person who uses GeoTime for any personal matter or nefarious purpose may be held personally liable for such activity.
7. Please work to ban the use of GeoTime entirely, and up until that time, please require that the use of GeoTime be reported in a monthly transparency report - available on the city's website, to include the demographics of the target(s).
- 8, Please mandate that SPD
and any other agency or department borrowing this technology, collect detailed enough demographic information on the use of this tool to enable transparency audits by the city that can identify disproportionate use.

Email Comment

QUESTIONS

Is any data from this tool shared with Fusion Centers?

CONCERNS

Due to the potentially vast range of data uploaded, people unrelated to a crime may have their data in GeoTime (privacy-violating).

Data errors (i.e. cell tower software bug) or algorithmic bias (i.e. night shift workers flagged as drug dealers) resulting in the wrong person being implicated.

Unknown if/how an individual can correct inaccuracies.

Potentially disproportionate use of this technology.

SPD using GeoTime to assist an agency outside WA in investigating a crime that is not illegal in WA as it relates to healthcare, especially reproductive rights & gender-affirming care.

RECOMMENDATIONS

Restrict use of these tools to only violent offenses.

Prohibit the use of Social Media Analysis & predictive policing.

Prohibit assisting an investigation of a crime in another state when that crime is not illegal in WA state & is related to healthcare.

Prohibit SPD from storing data on Uncharted Software's servers.

Post the contract(s) publicly.

Require a monthly transparency report covering: tool name & version, data sources, offense, whether the extraction resulted in an arrest/conviction, whether new unrelated leads generated, targets' demographic data, & where/who data was shared with.

Thank you for your time.

2022 Surveillance Impact Report Executive Overview

GeoTime

Seattle Police Department

Overview

The Operational Policy statements in this document represent the only allowable uses of the equipment and data collected by this technology.

The purpose of this Executive Summary is to highlight policies, technology and practices regarding the surveillance technologies under Council review. This document outlines information, including policies and practices, about the collection, use, sharing, security and access controls for data that is gathered using a technology or program. All information provided here is contained in the body of the full SIR document but is provided in a condensed format for easier access and consideration.

1.0 Purpose

GeoTime is geospatial analysis software that allows the visual analysis of events over time. Utilizing geodata, such as latitude and longitude, procured during criminal investigations, investigators use GeoTime to create specialized 2 and 3 dimensional maps of call records and cell site locations. These maps allow investigators to see patterns in the existing data that might not be interpreted through other methods.

GeoTime is used to aid in the investigation of crime by helping detectives analyze location information over time and present patterns in the data. Analyzing observations over time and geography is a common task but typically requires multiple, separate tools. GeoTime is an application which has been developed to visualize the spatial inter-connectedness of information over time and geography. A PIA is required because some members of the public may be concerned that this software could be used to track members of the community who are not associated with the investigation.

2.0 Data Collection and Use

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

3.0 Data Minimization & Limitations

GeoTime is only used during the investigation of crimes by SPD detectives. Access for personnel into the system is predicated on state and federal law governing access to Criminal Justice Information Services (CJIS). This includes pre-access background information, appropriate role-based permissions as governed by the CJIS security policy, and audit of access and transaction logs within the system. All users of GeoTime must be CJIS certified and maintain Washington State ACCESS certification.

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

4.0 Access & Security

Access

Supervisors and commanding officers are responsible for ensuring compliance with policies.

All SPD employees must adhere to laws, City policy, and Department Policy ([SPD Policy 5.001](#)), and any employees suspected of being in violation of laws or policy or other misconduct are subject to discipline, as outlined in [SPD Policy 5.002](#).

[SPD Policy 12.050](#) defines the proper use of criminal justice information systems.

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

The files created with GeoTime are stored within investigation files for the case.

Access to GeoTime requires SPD personnel to log in with password-protected login credentials which are granted to employees with business needs to access GeoTime. These employees are ACCESS and CJIS certified.

According to the CJIS security policy, “The agency shall configure the application, service, or information system to provide only essential capabilities and shall specifically prohibit and/or restrict the use of specified functions, ports, protocols, and/or services.”

All SPD employees are backgrounded and access is controlled by SPD Manual Title 12 provisions governing Department Information Systems including SPD Policy 12.040 - Department-Owned Computers, Devices & Software, SPD Policy 12.050 - Criminal Justice Information Systems, SPD Policy 12.080 – Department Records Access, Inspection & Dissemination, SPD Policy 12.110 – Use of Department E-mail & Internet Systems.

Security

GeoTime does not collect information or data. It is a tool used to aggregate and analyze data manually input by investigators and exports complex geospatial maps which users save into locally stored investigation files. No information is saved inside the GeoTime tool.

SPD’s Audit, Policy and Research Section (APRS) can conduct an audit of the any system at any time. In addition, the Office of Inspector General can access all data and audit for compliance at any time.

SPD conducts periodic reviews of audit logs and they are available for review at any time by the Seattle Intelligence Ordinance Auditor under the City of Seattle Intelligence Ordinance. The software automatically alerts users of data that must be deleted under legal deletion requirements such as 28 CFR Part 23.

5.0 Data Sharing and Accuracy

No person, outside of SPD, has direct access to GeoTime.

Data analyzed by GeoTime may be shared outside SPD with the other agencies, entities, or individuals within legal guidelines or as required by law.

Data may be shared with outside entities in connection with criminal prosecutions:

- Seattle City Attorney's Office
- King County Prosecuting Attorney's Office
- King County Department of Public Defense
- Private Defense Attorneys
- Seattle Municipal Court
- King County Superior Court
- Similar entities where prosecution is in Federal or other State jurisdictions

Data may be made available to requesters pursuant to the Washington Public Records Act, [Chapter 42.56 RCW](#) ("PRA"). SPD will apply applicable exemptions to the data before disclosing to a requester. Individuals have the right to inspect criminal history record information maintained by the department ([RCW 10.97.030](#), [SPD Policy 12.050](#)). Individuals can access their own information by submitting a public disclosure request.

Per [SPD Policy 12.080](#), the Crime Records Unit is responsible for receiving, recording, and responding to requests "for General Offense Reports from other City departments and from other law enforcement agencies, as well as from insurance companies."

Discrete pieces of data analyzed by GeoTime may be shared with other law enforcement agencies in wanted bulletins, and in connection with law enforcement investigations jointly conducted with those agencies, or in response to requests from law enforcement agencies investigating criminal activity as governed by [SPD Policy 12.050](#) and [12.110](#). All requests for data from Federal Immigration and Customs Enforcement (ICE) authorities are referred to the Mayor's Office Legal Counsel in accordance with the Mayoral Directive, dated February 6, 2018.

SPD shares data with authorized researchers pursuant to properly execute research and confidentiality agreements as provide by [SPD Policy 12.055](#). This sharing may include discrete pieces of data related to specific investigative files analyzed by this application.

Individuals may request records pursuant to the PRA, and individuals have the right to inspect criminal history record information maintained by the department ([RCW 10.97.030](#), [SPD Policy 12.050](#)). Individuals can access their own information by submitting a public disclosure request.

6.0 Data Retention

Unit supervisors are responsible for ensuring compliance with data retention requirements within SPD.

Audit, Policy & Research Section personnel can also conduct audits of all data collection software and systems. Additionally, any appropriate auditor, including the Office of Inspector General and the federal monitor can audit for compliance at any time.

SPD policy contains multiple provisions to avoid improperly collecting data. [SPD Policy 7.010](#) governs the submission of evidence and requires that all collected evidence be documented in a GO Report. [SPD Policy 7.090](#) specifically governs the collection and submission of photographic evidence. Evidence is submitted to the Evidence Unit and associated with a specific GO Number and investigation. And, [SPD Policy 7.110v](#) governs the collection and submission of audio recorded statements. It requires that officers state their name, the Department name, the General Offense number, date and time of recording, the name of the interviewee, and all persons present at the beginning of the recording.

Additionally, [SPD Policy 5.140](#) forbids bias-based policing and outlines processes for reporting and documenting any suspected bias-based behavior, as well as accountability measures.

All SPD employees must adhere to laws, City policy, and Department Policy ([SPD Policy 5.001](#)), and any employees suspected of being in violation of laws or policy or other misconduct are subject to discipline, as outlined in [SPD Policy 5.002](#).

Per the CJIS Security Policy:

“5.8.3 Digital Media Sanitization and Disposal The agency shall sanitize, that is, overwrite at least three times or degauss digital media prior to disposal or release for reuse by unauthorized individuals. Inoperable digital media shall be destroyed (cut up, shredded, etc.). The agency shall maintain written documentation of the steps taken to sanitize or destroy electronic media. Agencies shall ensure the sanitization or destruction is witnessed or carried out by authorized personnel.

5.8.4 Disposal of Physical Media Physical media shall be securely disposed of when no longer required, using formal procedures. Formal procedures for the secure disposal or destruction of physical media shall minimize the risk of sensitive information compromise by unauthorized individuals. Physical media shall be destroyed by shredding or incineration. Agencies shall ensure the disposal or destruction is witnessed or carried out by authorized personnel.”