



CITY OF OAKLAND

AGENDA REPORT


TO: Jestin D. Johnson
City Administrator

FROM: Floyd Mitchell
Chief of Police

SUBJECT: Pen Register / CDR Analysis
Technology

DATE: July 10, 2024

City Administrator
Approval


Jestin Johnson (Jul 11, 2024 20:19 PDT)

Date Jul 11, 2024

RECOMMENDATION

Staff Recommends That The City Council Adopt A Resolution Authorizing The City Administrator To 1) Approve A Subscription With Gladiator Forensics To Allow The Oakland Police Department (OPD) To Forensically Collect And Analyze Call Detail Record Data And Pen Register Data, For Five Years From The Effective Date Of The MOU At A Yearly Cost Of Approximately Twenty-Seven Thousand Dollars, 2) Approve OPD's Pen Register, Trap, and Trace Policy Use Policy, And (3) Approve OPD's Call Detail Record Analytic Tools Policy.

EXECUTIVE SUMMARY

Approval of this proposed resolution will authorize the City Administrator or designee to enter an agreement between the City, and Gladiator Forensic, to obtain record analysis and collection technology to assist with criminal investigations conducted by the Oakland Police Department.

BACKGROUND AND LEGISLATIVE HISTORY

Pen registers are devices that record outgoing information from a source (telephonic or electronic communications, such as cell phone, Facebook, or Instagram) and trap and trace devices that record incoming information to a source. Both are used in conjunction with each other and often cannot be separated by the communication provider and the term "pen register" is often used to describe both devices.

Upon installation of a pen register by the telephonic or electronic communication provider, OPD will receive the following information:

1. Outgoing addressing information from the target account (Such as outgoing IP address or phone number and date/time of the communication).
2. Incoming addressing information to the target account, if available from the provider.
3. Duration of the communication, if available from the provider.

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4. The cell site that the target account communicated with during this communication, if available from the provider

Call Detail Records (CDRs) are data records that contain detailed information about a telephone call or other telecommunications transactions pertaining to an individual telephonic communication device. These records are typically generated by telecommunications service providers or network equipment and include a variety of information related to the call.

CDRs are the historical form of the data that a pen register records in real time for law enforcement. CDRs are often provided as Excel spreadsheets or PDF documents by the corresponding telecommunications service providers, usually via encrypted e-mail. These files would contain hundreds of lines of data depending on the time period requested. To conduct effective analysis of these data, OPD utilizes analytic tools to visualize the data, such as the analysis of historical calling patterns and frequent contacts or the location of the device in a particular time period.

This takes the form of the investigator loading the CDRs into the analytic tool and selecting the desired statistical analysis or location mapping of these records.

Call detail records (CDRs) and their analysis via analytic tools, as well as the usage of pen registers, support OPD investigations by assisting with the apprehension of wanted suspects and furthering criminal investigations by identifying communication patterns, movements, and connections between individuals.

ANALYSIS AND POLICY ALTERNATIVES

This policy advances the Citywide priority of **holistic, trustworthy government**. OPD is committed to reducing crime and serving the community through fair, quality policing. OPD can more effectively save lives, reduce harm, and reduce crime through the forensically collection and analysis of call detail record data and pen register data.

Authorized Purposes and Legal Authority

Per policy, as outlined in the accompanying resolution, OPD would be limited to using the technology to obtain electronic data in the following scenarios:

- Criminal investigations with the issuance of a search warrant to obtain historical call detail records and/or installation of pen registers.
- Criminal investigations needing historical call detail records and/or installation of pen registers due to an emergency involving danger of death or serious physical injury to any person require access to the electronic information.

In the case of an identified exigency, a post hoc application for a search warrant shall be made whenever possible and no later than 48 hours after use.

What Historical Call Detail Record and Pen Register Data Does in an Investigation

Once obtained via the proper legal process, law enforcement can use CDRs for various purposes, including:

Investigating Crimes: CDRs can provide crucial information about the parties involved in criminal activities, their communications patterns, and their movements based on location data.

Establishing Timelines: CDRs can help establish timelines of communication between individuals, aiding in reconstructing events related to a crime.

Identifying Suspects: By analyzing CDRs, law enforcement can identify potential suspects or persons of interest and establish connections between individuals involved in criminal activities.

Corroborating Testimony or Alibis: CDRs can corroborate or refute alibis and testimonies provided by witnesses or suspects by providing evidence of their whereabouts and communications at specific times.

CDRs records are historical in nature and are produced by telecommunication companies for timeframes that had already taken place.

The pen register operates in real-time, recording meta-information about outgoing and incoming communications as they occur. It helps investigators to establish connections between individuals, track patterns of communication, and gather evidence related to the timing and frequency of calls. It may help establish connections between individuals, and gain insights into the relationships and activities of the suspects. Pen register data also further corroborates other evidence, provides leads for further follow-up investigations, and assists with tracking wanted suspects.

None of these records contains any content of the communication.

Current Technology Used by OPD and Alternative

OPD currently utilizes Cellhawk for its CDR analysis and Penlink PLX for pen register usage. The data is provided by telecommunication providers, and both tools do not alter the data.

Call detail record analysis techniques are standardized and consistent across different vendors of analytic tools. The analyses are performed using the same method and would provide the same results given the same CDRs were ingested.

Pen register data are also standardized, and the vendor provides an interface that allows easier interpretation and understanding of the data. Historically, Penlink was the only vendor that provided such a service, and it is used by multiple law enforcement agencies, including the Department of Homeland Security's Immigration and Customs Enforcement.

Gladiator Forensic has developed its pen register collection interface and is currently a competitor to Penlink. Gladiator Forensic also provides an interface for historical CDR analysis. Gladiator Forensic is not currently conducting business with DHS / ICE and is not in violation of the Sanctuary Contracting ordinance.

Other than Gladiator Forensic, there are no known competitors to Penlink that provide pen register collection services.

Oversight by OPD

The OPD Policy and resolution that accompanies this report required that the usage of the pen register collection service as well as CDR analysis tools by OPD to be documented for tracking purposes. Each use of the pen register collection service also requires the proper legal authority to be documented prior to the collection.

The Chief of Police, the Privacy Advisory Commission, and the Public Safety Committee will be provided with an annual report that includes information on the usage of the pen register collection service as well as CDR analysis tools by OPD.

PUBLIC OUTREACH / INTEREST

OPD staff collaborated with the Privacy Advisory Commission in the creation of both policies. This collaboration included presentation, discussion, and revision at meetings of the Privacy Advisory Commission. The policies will be placed on the OPD website upon City Council approval of the accompanying resolution.

COORDINATION

This report and legislation have been reviewed by the Office of the City Attorney.

FISCAL IMPACT

OPD currently utilizes CellHawk for its call detail record analysis. The cost to the department is approximately \$5000 a year.

OPD currently utilizes PenLink for its pen register usage. The cost to the department is approximately \$38,000 a year. Penlink also requires a waiver from the Sanctuary Contracting ordinance since it contracts with DHS / ICE.

OPD is seeking to switch to Gladiator Forensics, which will cost approximately \$27,000 a year to perform both call detail record analysis and pen register usage.

OPD will save \$16,000 a year by switching to Gladiator Forensics, and by switching to Gladiator Forensics, OPD will honor the intent of the Sanctuary Contracting ordinance by using a vendor that does not require a waiver.

The funding will be through the General Purpose Fund (1010), Information Technology Unit Org. (106410), Account (TBD), Project (1000008), and Program (TBD).

SUSTAINABLE OPPORTUNITIES

Economic: There are no economic opportunities associated with this report.

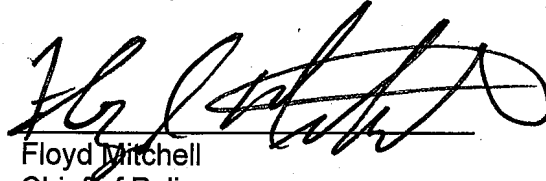
Environmental: There are no environmental opportunities associated with this report.

Race and Equity: All residents benefit from greater public safety. Successful investigations and more prosecutions of criminal activity will likely occur from the implementation of this MOU.

ACTION REQUESTED OF THE PUBLIC SAFETY COMMITTEE

Staff Recommends That The City Council Approve A Resolution Authorizing The City Administrator To 1) Approve A Subscription With Gladiator Forensics To Allow The Oakland Police Department (OPD) To Forensically Collect And Analyze Call Detail Record Data And Pen Register Data, For Five Years From The Effective Date Of The MOU At A Yearly Cost Of Approximately Twenty-Seven Thousand Dollars, 2) Approve OPD's Pen Register, Trap, and Trace Policy Use Policy, And (3) Approve OPD's Call Detail Record Analytic Tools Policy.

Respectfully submitted,



Floyd Mitchell
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Attachments (6):

- A: CDR use policy
- B: Pen register Use Policy
- C: CDR impact report
- D: Pen Register impact report
- E: Gladiator data sheets
- F: Gladiator quote