Nighthawk – LEOVision
Real-World Rationale

Nighthawk LEOVision allows for the visualization of multiple, complex datasets in a user friendly and intuitive environment. The software allows investigators to focus on the case, not the task of managing, merging, correlating and/or sifting through enormous amounts of information to find that one critical piece. One way to think about the value of this program is the cost savings approach.

Depending on the investigation type, it is not uncommon for investigators to request and receive data from Facebook, cellular service providers, Google, GPS trackers, ankle monitors, ShotSpotter, and several other sources. While not every case involves each of these data types, many cases (especially serial shootings) rely on several of these sources of information.

Generally speaking, Call Data Records (CDR) from cellular service providers often contain 7,000 or more lines of data for a single cell phone (and there is typically more than one phone per individual in an investigation), and Facebook data records may contain 12,000 or more *pages* of information. A current investigation (May 2019) has a single Facebook data record containing *90 thousand pages* of data. Facebook and Google geo-location pings can occur every 2 to 10 seconds. Factoring these numbers, for a single person involved in an investigation the investigator may need to examine and manage 50,000 lines of data. Without Nighthawk LEOVision, often this data will not be examined due to the sheer number of man-hours and the manual effort required to do it. In fact, an investigator may sometimes not write a records request for data knowing that the time it will take to manually examine it is prohibitive.

While the information contained in these data sets is valuable, the ability to search and analyze it has been historically cumbersome and time intensive. Nighthawk LEOVision allows the investigator to search, visualize, and manage all of these data sets, for multiples suspects, simultaneously.... and it is extremely fast.

It is difficult to quantify the amount of time required to complete a complex task like this. However, it's safe/conservative to say that it could take an investigator five or more hours just to search an average Facebook return for the pertinent information needed. Then, if they locate that information, it will not be presented chronologically and the references to any associated pictures and videos are disjointed and hard to put into context. This is just for one person, and that one set of data, so the task of repeating this process for multiple persons under investigation increases the time commitment exponentially. Considering case load of each investigator, it's easy to understand why sometimes these data sets cannot be thoroughly examined without using Nighthawk LEOVision.

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Using Nighthawk, examining these data sets could take less than 30 seconds and the information is presented in a logical easy to follow format. Additionally, multiple data types (CDR, ShotSpotter, Facebook, Google, and other data types) can be managed and visualized together. This allows the investigator to evaluate the relevance of related information at the same time. For example, an investigator can now see how a Facebook post leads to phone calls and text messages, which then leads to a Facebook Messenger conversation and a shooting that occurred, resulting in ShotSpotter data. The ability to efficiently visualize interactions like those has led to previously unknown associations, new suspects, and the development of probable cause that otherwise may have been missed. These are real-world examples that have been experienced by use of Nighthawk LEOVision by investigators over the past three years 2016-2019).

For example, a Taskforce was investigating a home invasion and officer involved shooting. This case relied heavily on data from several service providers. There were over 266,000 lines of data loaded into Nighthawk LEOVision for this case. The case agent visualized all of the available data, for all of the suspects, and then conducted a search for four keywords and one phone number related to the case. The results returned 608 relevant items out of 266,482 lines of data. That search took less than 30 seconds. The ability to quickly visualize and search these large data sets, quickly moving past the dead ends, then allowing faster pursuit of new leads, is priceless.

Additionally, this software approach allows the investigator to further explore potential leads in a fraction of the time. The ability to do this uncovered links to previously unrelated shootings and expanded existing cases well beyond where they were previously. The savings in manhours more than pays for the cost of the program. It is truly a force-multiplier for every investigator who uses this software tool.

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