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IRP Solutions Corp.
Modern Investigation
Life Cycle Software

The less-lethal toolbox

- Less Lethal Showcase
- Duty Gear Showcase

SOFTWARE TECHNOLOGY

By Clint Stewart

Modern investigation life cycle software

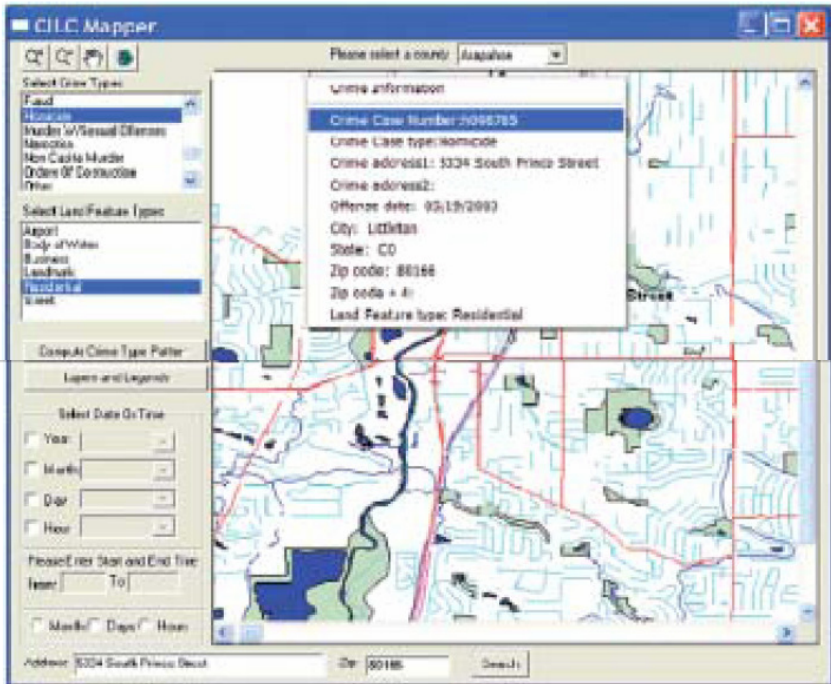
Modern criminal investigations are remarkably complex. The more elaborate the crime, the more complicated and costly the investigation. The amount of information to gather, organize, search and record can be staggering and, if done improperly, endanger the integrity of a case.

For years detectives conducting investigations have relied on a note pad and pencil to document their findings. Through the course of an investigation, sometimes reams of paper are compiled and mounds of folders lie on the corner of a lead investigator's desk waiting for updates.

An administrative assistant types up the reports. Reports are forwarded to the district attorney's office. The district attorney wins some cases, but others fall through the cracks. There are many factors that can contribute to why a case is won or lost, but one controllable factor is a thoroughly documented investigation.

Because many investigations are so paper-dependent, often research pertaining to an investigation is very labor intensive and inefficient. Detectives have to deal with lost or misplaced files and sometimes find themselves having to reconstruct, not the crime scene, but the records pertaining to the investigation. Establishing timelines and showing accountability of evidence also can be challenging tasks, especially when relying solely on a paper-driven process.

In recent years, efforts have been undertaken to make the investigation process more efficient and automated. With these efforts came the development of various software applications. The system most familiar to law enforcement professionals is the records management system (RMS).



The CILC Mapping facility allows agencies to map crimes based on crime type, land feature type, date, date range or a combination of any of these attributes. Additional details about crimes displayed on the map can be obtained by clicking on the mapped crime as shown on the example screen.

While a RMS is adequate for the patrol officer, it falls far short of the requirements needed by detectives. When it comes to pure "investigations" systems and software, many law enforcement agencies are still in search of a solution.

Research pinpoint problems

To understand how far-reaching the implications of non-automated systems are, consider three examples from recent reports: the National Center for State Courts' 2000 report on Retooling Criminal Justice; Michigan State University's (2001) Problems in Processes and Procedures in Criminal Investigations; and the University of New Orleans' (2002) Consequences of Inadequately Integrated Justice

Information Systems.

Michigan State University performed a three-year study supervised by Dr. Frank Horvath. Its primary focus was identifying problems in processes and procedures of the criminal investigative process (CIP), which it found to be the gateway to the criminal justice system in America. The presumption of innocence is a fundamental provision of civil rights in the U.S. Constitution. Therefore, anyone accused of a crime is innocent until proven guilty by a jury of peers; hence the investigative activity is of great importance to case resolution if individual civil rights are to be preserved.

One of the many revelations of this work was that the CIP continues to be a manually driven process, from its early history in 1829 until modern

times. This study was conducted as an actual survey of law enforcement officers comprising respondents from 71 percent of large agencies and 56 percent of small agencies nationwide. Horvath and his team garnered valuable information about the national law enforcement community from more than 300,000 sworn officers in this first-ever nationally representative study.

Some experts believe there is a direct correlation between major case debacles and the lack of automated criminal justice information systems, which includes systems that manage CIP. Justice George Nicholson,

Integrated criminal justice processes lead to decreased criminal activity.

— Center for Society, Law and Justice, University of New Orleans

California State Court of Appeals, has written for the National Center for State Courts regarding the importance of using modern technology to facilitate a wide range of criminal justice processes. He says that for decades, even centuries, criminal justice professionals have worked in face-to-face and voice-to-voice encounters.

He adds that as the world has moved into the fast lane of the information age, criminal justice has languished in many areas. The result is faltering public safety, declining civil rights and waning public trust based upon the inability of these antiquated methods to render justice in all too many cases.

The Center for Society, Law and Justice at University of the New Orleans published a very compelling report in 2002. It focused on the consequences of law enforcement and the courts operating in a wide range of criminal justice processes without the benefit of adequately integrated systems. This federally funded study, pub-

lished by Dr. Michael Geerken, represents the first empirical examination of the consequences of failing to create and maintain adequately integrated systems. It revealed that such systems actually lead to decreased criminal activity.

While it may be true that some agencies are making an effort to move toward automation, it

doesn't seem to be a coordinated effort. One agency may be looking into an enterprise-wide solution, while another agency leaves it to its various divisions to find their own solution — again, dramatically impacting the efficiency of how the department could and should operate.

Software to the rescue

Software developer, IRP Solutions Corp. of Colorado Springs, Colorado, developed a software application that promises to revolutionize the way criminal investigations are approached and managed. It integrates criminal justice systems on all levels of law enforcement, including state, local and federal investigations.

Its CILC program provides collaborative computerized interfaces for all contributors participating in the investigation, including evidence collection technicians, crime scene recorders, photographers, coroners, prosecutors, investigators, etc. This allows the agency or investigator to manage hundreds of individual components of an investigation through an organized and efficient computer facility. The software enables the investigator to handle thousands of data points simultaneously with maximum efficiency and accuracy — from the initial stages of an investigation to the prosecution or final



The CILC Evidence Tracking screen facilitates the control and accountability for all pieces of evidence from the time of their discovery, marking, recovery and subsequent check-in and check-out transactions. Information captured on evidence transactions includes the name and agency of the person performing the action, the actual action performed on the evidence and the date/time of the transaction.

phases.

Additional benefits are that it saves valuable time, human resources and money for the agencies while minimizing case debacles. The software promises to be effective in elaborate cases that require the cooperation of a multi-jurisdictional investigative force. It allows data to be gathered and shared in real time by unlimited numbers of law enforcement.

The program provides real-world solutions to the challenges facing detectives on a daily basis. The developers incorporated modules within the program that have proven to be of significant importance to the law enforcement community.

"I found in reviewing and testing CILC in the field that it provides significant end-to-end technology from proven methodologies in criminal investigations operations," comments Larry Iverson, a retired investigations instructor of the Colorado Springs Police Academy. "The software is the most advanced criminal investigative software system I have ever seen or used in my 39-year career in law enforcement."

Processing case information is based upon certain fundamental pillars of investigative practices and procedures. These are collection, analysis, distribution and presentation. CILC

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encompasses the full-life cycle of the investigative process. It combines the beneficial uses of computers, data processing, media storage, reporting, mapping and presentation techniques with the critical business processes, agency policies and imperatives to deliver effective and thorough investigations.

The software exploits cutting-edge design and development techniques to deliver very robust granularity for investigative processes. Successful case clearances depend upon several aspects of operational facilities within the application including:

■ **Intra/inter-agency investigations and information sharing.** CILC is a multi-user solution that supports collaboration between several agencies. It enables large investigative teams to access, query, update and analyze investigative information concurrently. CILC is a perfect solution for multi-jurisdictional tasks forces and homeland security investigations requiring centralized investigative data. It supports information sharing among federal, state and local agency detectives, sections, bureaus and departments. The software is currently available in a client-server version, and a Web-enabled version is due in the follow-on release. Also, the CILC PDA and Tablet PC versions provide for transfer of case files for work in the off-line mode in the field.

■ **Crime analysis.** CILC helps investigators easily recognize patterns, which can be quickly shared with other investigators on a case. The opportunities for case correlation, GIS location-based analysis, timeline analysis, link analysis and evidence evaluation are immediately realized. Problem-solving has been identified as a mathematical process, a process which can be very complex and difficult to manage using pencil and paper. CILC helps simplify the process just as a calculator helps solve mathematical equations.

Mistakes are avoided, pattern recognition is facilitated and correlation of details is easier to validate.

■ **Criminal intelligence.** The advent of integrated justice information systems allows for access to local,

state and federal databases to retrieve relative information for a specific case. This information can be loaded into the database. Association of information from other justice system databases to a specific case gives the investigator added intelligence and pattern-recognition analysis.

■ **Task and resource management.** CILC provides a multi-purpose case-activity tracking capability. This module can be used by management and supervisors to assign tasks such as evidence collection, leads follow-ups, interviews, etc. Detectives may also assign themselves tasks and activities. The task management module also features time entry functionality to track the total time spent by each officer/investigator on a particular assignment/task.

■ **Auditing and accountability.** To ensure compliance with agency policy, procedures and system user accountability, every modification of information in the application is audited, encrypted and stored in a standalone repository. Audit information can be retrieved by system administration personnel using the Audit Manager Utility to generate customized reports for agency management and supervisors.

■ **Evidence chain-of-custody.** Whether evidence is recovered from the crime scene or checked out from the crime laboratory, the software allows the facility to record vital information, document all transactions, and maintain control over the movement and disposition of each item.

■ **OCR/Document Imaging Capability.** CILC enables agencies to retain case investigation-related documents in electronic format for an indefinite period of time. These documents can be retrieved, reviewed, searched and queried by multiple users simultaneously and with immediate access. The elimination of paper copies of these documents greatly increases investigator productivity and streamlines investigative processes.

■ **Training capability.** CILC was built by investigators, for investigators. Critical subject matter expertise is embedded in the software using best

practices and procedures. This expertise is reflected in the software in the form of policy and procedural reminders actually shown on the applicable screens. This feature assists less-experienced investigators or patrol officers by positively reinforcing department policy and procedures, and increases compliance.



The CILC Task Management screen allows investigation supervisors to assign, track and maintain visibility of the high-level tasks and detailed activities of each investigator working the case. CILC enables the user to reference lead details from the Task Management screen for tasks that are related to leads.

“We’re very excited and proud about launching the CILC software, because it is a working component of a new philosophy we have developed called Computerized Criminal Investigative Process or CCIP,” explains Gary Walker, IRP Solutions president. “The criminal investigative process has never been computerized in a holistic fashion and law enforcement professionals from many agencies have already responded with enthusiasm about the key features of this new capability.” ■

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