

Crime Analysis Associates Develops Crime Analysis Software Using Microsoft MapPoint Technology

Microsoft Partner Solution Study

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Law enforcement agencies nationwide depend on crime analysis units to help put criminals behind bars. Crime Analysis Associates contributes to this endeavor by providing Crime Analysis Information System Mapping (CAIS-Map)—a crime analysis software application based on Microsoft® MapPoint® technology. You can use this easy, affordable application, created by a crime analyst for crime analysts, to geographically analyze and visualize crime data with maps, such as hot spot, time series, drive time zone, and tactical prediction maps. You can then create reports and include them and your crime maps in crime bulletins and information packets for operational teams and management, or publish them directly to the unit's intranet site.

Partner Profile

Chris Gebhardt, Technical Advisor to the California Crime and Intelligence Analyst's Association, former Commander of the Washington, D. C. Metropolitan Police Department Tactical Crime Analysis Unit, and leading authority on crime analysis practices and techniques sought to utilize his vast knowledge and experience as a crime analyst by creating affordable software for crime analysts. He founded Crime Analysis Associates as the definitive source for crime analysis software, and with Steve Gottlieb, another authority on crime analysis, began creating crime analysis software based on the Microsoft MapPoint platform, thus defining a new crime analysis software market.

When asked why he chose Microsoft MapPoint technology to add mapping capability to his Crime Analysis Information System application, Chris said, "With access to more than 90% of the MapPoint 2002 object model from Microsoft Visual Basic® and the MapPoint Control, the choice was easy. When I decided to add mapping capability to CAIS, MapPoint allowed me to include it in a single weekend."

Business Challenge

Historically crime analysis units in law enforcement agencies have manually analyzed crime data and tracked crime patterns using calculators, plastic pushpins, post-it labels, and paper, fold-out maps. This manual process is cumbersome, error-prone, and subject to misinterpretation. High-profile crime units with larger budgets might use general-purpose mapping or Geographic Information System (GIS) software, but these systems are expensive, require an extensive amount of training, and aren't designed specifically for crime analysis.

Chris Gebhardt's goal was to develop an easy-to-learn, affordable crime analysis and mapping tool specifically designed for crime analysts that automated daily tactical, strategic, and administrative tasks, and streamlined the data analysis process.

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Crime Analysis Associates

Contact Information

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Profile

Crime Analysis Associates, a Microsoft Alliance MapPoint partner, provides crime analysis software to law enforcement agencies nationwide.

Target Audience

Crime analysts in law enforcement agencies who need an affordable tool to analyze and map crime data

Software and Services

- Crime Analysis Information System (CAIS)
- Crime Analysis Information System Mapping (CIAS-Map)
- Crime analysis unit setup, crime mapping instruction, and analyst hiring review
- Crime Analysis Response Team

Microsoft Technologies

- Microsoft® MapPoint®
- Microsoft Visual Basic®

Developer Satisfaction

"When I show analysts all they can do with MapPoint 2002, they are amazed. Then I tell them the price, and they are floored. When I tell them they can have all this and CAIS functionality in a single package, the deal is done. MapPoint 2002 allowed me to do this."

--Chris Gebhardt
Founder

Crime Analysis Associates

Solution

Chris accomplished his goal with Crime Analysis Information System Mapping (CAIS-Map)—an affordable software application that uses Microsoft MapPoint technology to analyze, visualize, and map crime data. Using CAIS-Map, you can integrate all your crime data, such as the case, offense, pattern number, address, date, time, and coordinates into a single, easily maintainable data source by importing the data from Microsoft Excel spreadsheets or manually entering it into CAIS-Map. Then, using Microsoft MapPoint technology, you can work from this single data source to geocode to more than six million U.S. and Canadian addresses and analyze the data in a myriad of ways and in a fraction of the time it would take to do it manually. For example, you can strategically analyze trends and changes in criminal behavior using single and double variables to forecast occurrences of crime. You can predict when and where criminals will strike using tactical analysis. You can even use time series analysis to determine the time of day a particular type of crime occurs most often. CAIS-Map automates all these tasks for you, even the day-to-day administrative tasks, such as calculating percentage increases and matching grant money.

Once you locate a trend, pattern, or high crime rate area through data analysis, the Microsoft MapPoint technology integrated into CAIS-Map also enables you to visualize your crime data with maps. You can create tactical maps using polylines that show crime and kidnapping drive time zones indicating how far someone can drive in a given amount of time. You can use pushpins to track a criminal's path with time series maps or indicate the location of reported burglaries in a particular neighborhood with tactical location maps. You can also create hot spot maps that indicate high crime rate areas, which are often too dense to view on paper, fold-out maps. Then, just print your maps to post them in the office, or easily copy and paste them into other Microsoft Office documents to include them in your crime bulletins.

Map Examples

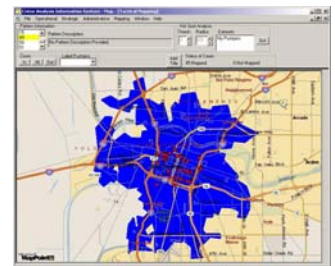
The following maps are examples of crime maps you can create using CAIS-Map.



Tactical location map



Drive time map



Drive time zone map



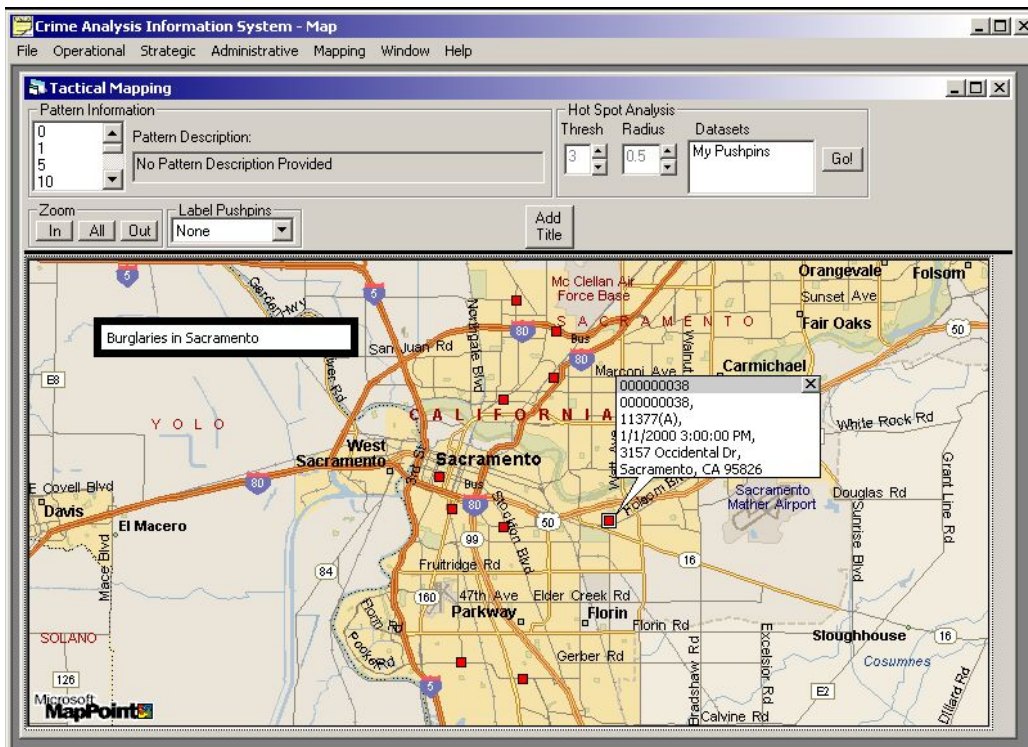
Hot spot map



Time series map



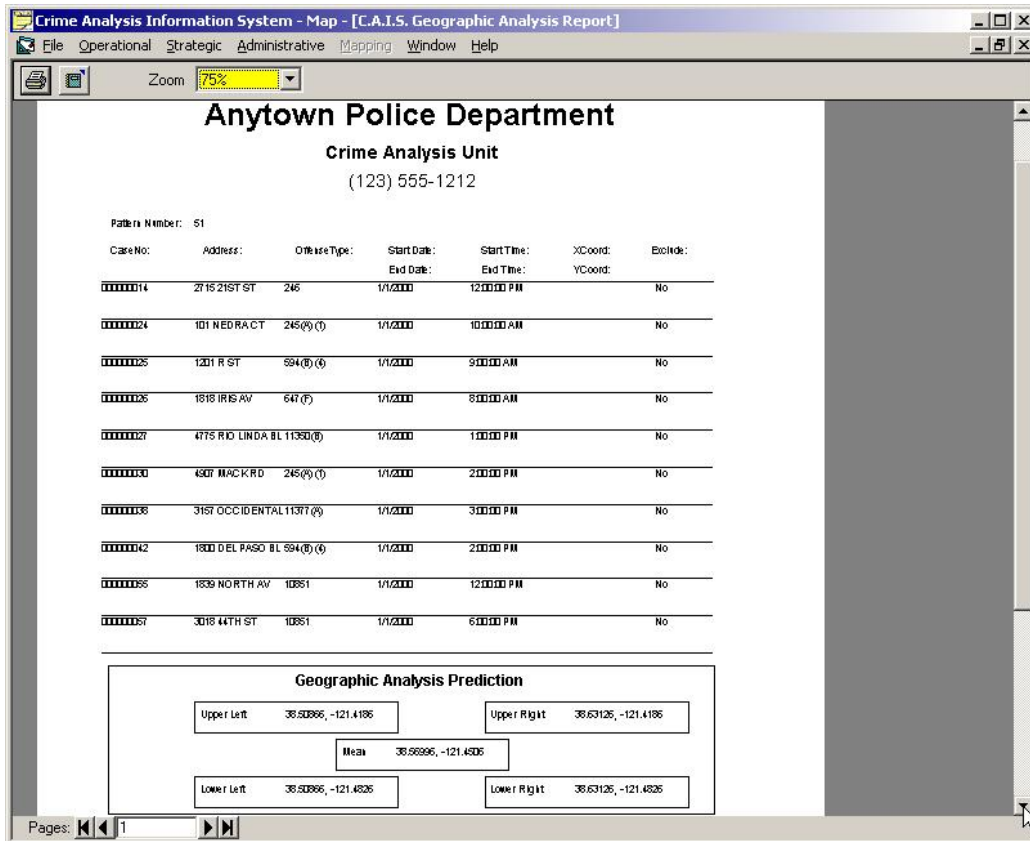
Tactical prediction map



Using CAIS-Map and Microsoft MapPoint technology, you can geocode to roads in the United States and visualize your crime data with electronic pushpins, thematic maps, and demographic data.

Microsoft

The last component you'll need is a summary of your data analysis. The Microsoft Visual Basic Report Engine enabled Chris to add reporting capabilities to CAIS-Map. With this functionality, you can create custom reports on your crime data analysis that include just as much detail as you need. Then include all your maps and reports in information packets for operational teams and management. They can scan the reports and quickly zero in on pushpins and shaded areas in the maps, helping them to understand the crime data quickly, make mission-critical, fiscal, and resource decisions, and hopefully accomplish the ultimate goal of putting criminals behind bars.



Create custom reports, such as geographic prediction and earliest date/time analysis reports, and then print them for your operational units or publish them to your unit's intranet site so the entire unit can review the data.

For More Information

For information on Microsoft MapPoint, visit <http://www.microsoft.com/office/mappoint/default.htm>. For information on working with the MapPoint Control and object model, visit <http://msdn.microsoft.com/library/default.asp?URL=/library/officedev/mappoint/BIZAboutProgramming.htm>.

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