

United States Postal Service Fights Crime With GIS

Highlights

- GIS maps link data to individuals, transactions, and USPS offices to reveal crime patterns.
- Easy-to-use Web-based application uses ArcIMS technology that integrates with existing IT platform.
- Customized digital maps provide managers with visualization for more intuitive decision-making.



The mail is big business. Maybe bigger than you realize. The United States Postal Service (USPS) delivers more than 212 billion pieces of mail – letters, cards, bills, and packages – every year and is the center of the multibillion dollar mailing industry. In addition to its many different postal services, USPS annually issues millions of money orders worth billions of dollars.

With big business comes the potential for crime, and criminals love to use money orders to launder their illegal funds. The transactions are a tool of choice because a customer can purchase money orders for under \$3,000 without having to provide any personal identification. In addition, money orders can be redeemed anywhere in the United States.

The USPS Bank Service Act (BSA) Compliance Office monitors money order transactions to detect suspicious activities. The department has embraced the use of geographic information system (GIS) technology to more effectively detect crime. GIS maps show where suspicious activities may be occurring and link data on individuals, transactions, and/or offices to reveal potential criminal patterns. Modern mapping and spatial analysis also help USPS managers make sense of extensive transactional databases and millions of bits of data to ensure they are meeting regulatory compliance.

“There are a number of federal anti-money-laundering laws and regulations that directly impact the postal service as an issuer of money orders,” says Al Gillum, subject matter expert for the United States Postal Service BSA Compliance Office. “We have responsibilities to monitor transactions and identify potentially suspicious activity through postal money orders. We recognized GIS as a powerful tool to look at all our data. We can use it to bring data together, analyze it, and share it with others. We can then make decisions that are based on good intelligence.”

Anti-Money Laundering and Regulatory Compliance

For years, USPS has successfully used software from Information Builders for its many business intelligence (BI) needs. This includes anti-money laundering and regulatory compliance. Recently, working with Information Builders developers, USPS began integrating GIS technology into its business intelligence platform to visualize data and locate trends.

The USPS BSA Compliance Office launched a pilot project to test a Web-based GIS application, which proved a success, and the department began using GIS full-time in 2006.

The Information Builders enterprise BI system, WebFOCUS, uses ArcIMS technology fully integrated within its business intelligence platform. It integrates a wide variety

of data from diverse business databases throughout USPS and provides Web-based geoanalysis and reporting tools that the USPS BSA Compliance Office can use to carry out tasks in a fast and efficient manner.

The BSA Compliance Office can identify a post office or series of offices that have an unusually high number of suspicious money orders over a certain time period; it can view money orders that look suspicious, such as a large number of sequentially numbered money orders, or see where individuals have made unusual money order transactions. The office can also determine if a number of money orders have been purchased from numerous locations and have been cashed by a single individual or at a single location.

Transactional data for each USPS office is captured at the point of sale and uploaded to the WebFOCUS business intelligence platform. Data for each office is automatically integrated into a single, complete data warehouse accessible via the Web to users in various departments throughout USPS.

ArcIMS technology, as part of the WebFOCUS system, geocodes data, provides the ability to integrate and overlay data, and supplies other GIS tools to customize digital maps and perform spatial queries. Finalized maps can then be made available to USPS managers and staff as part of the organization's monthly reporting.

"If you want to see data graphically represented, you click a button and GIS takes charge and starts adding the layers and bringing up data," says Gillum. "Let's say there are hundreds of money orders made payable to one individual or one company that an inspector is

investigating. You can extract a wide variety of data and start putting it on a map, showing things like the post offices where they were purchased. Then you do further analysis to look at whether there are clusters where the transactions took place or if they were dispersed across a wide geographic range. You add data, such as bank locations, and you get a more complete picture. You can look for discernable patterns that might otherwise be missed."

Managers can then make better decisions using the intelligence they have received or generated.

The data is not only used to investigate suspicious activity and to apprehend suspects, it's also used in prosecuting criminals. "The GIS maps speak wonders and, as the old adage goes, 'A picture is worth a thousand words,'" says Gillum. "That really comes to bear when law enforcement is making presentations in court settings where it is trying to make a case to a jury. Rather than pointing to a piece of paper with a zip code and a list of serial numbers, you show a map with the data represented graphically. You show the jurors the information in a way they can understand."

For a post office manager overseeing 8 or 10 districts, with each district responsible for scores of offices, GIS provides graphically rendered data that's easy to understand. The query capability – already available as part of the business intelligence platform – is extended to view map data, pan

and zoom around the map, and perform spatial queries that help managers check on their regulatory responsibilities. Points on the map are color coded to represent different types of regulatory issues, such as an office that has erroneous reports or an office that failed to submit a report. A compliance staff member or manager can open the Web application and use an identify tool that drills down and pulls up data available on an office, a transaction, or a series of transactions; these datasets are accessed via the map and appear in tabular format.

Managers can then make better decisions using the intelligence they have received or generated. For instance, if an office has a high number of erroneous reports, they can focus on that office and provide additional training. Time is saved identifying problems, and money is saved by focusing response efforts to exactly where they are needed.

"Of course, they know their offices very well, but it helps to be able to look at data on a map, where certain dots mean erroneous reports were submitted and other dots mean required reports were not submitted," says Gillum. "Management gets a better sense of where problems are and where additional attention needs to be focused."

The USPS BSA Compliance Office is looking at ways to extend GIS capabilities even further. It is contemplating integrating the technology into its Office of Foreign Assets Control (OFAC) compliance programs and considering how the technology can be used to detect the fraudulent use of debit cards at post offices. 🌀

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