

Byline Article Submission
Word Count: 1,041 Words (including About the Authors)
June 11, 2009

Retail Crime Crackdown: New Visual Technology Aids in Identifying and Reducing Organized Retail Crime

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Organized retail crime, or ORC, the general term for mega-shoplifting, is a serious problem, no question. Sophisticated criminal enterprises continue to steal and stockpile stolen merchandise, and eventually resell the stolen goods for a handsome profit. According to a recent RILA report, the stolen merchandise is often returned to the store for cash—or sold to unwitting buyers through flea markets, swap meets, pawn shops and increasingly through Internet auction sites.

More than a harmless property crime, ORC is a large, dangerous and expensive threat to businesses nationwide—costing retailers an estimated \$30 billion every year. Even worse, the slow economy continues to spur the trend, driving thieves to become more aggressive. The National Retail Federation’s 2009 Organized Retail Crime Survey found that 92 percent of retail companies were victims of organized crime activity during the past year, up 8 percent from 2008.

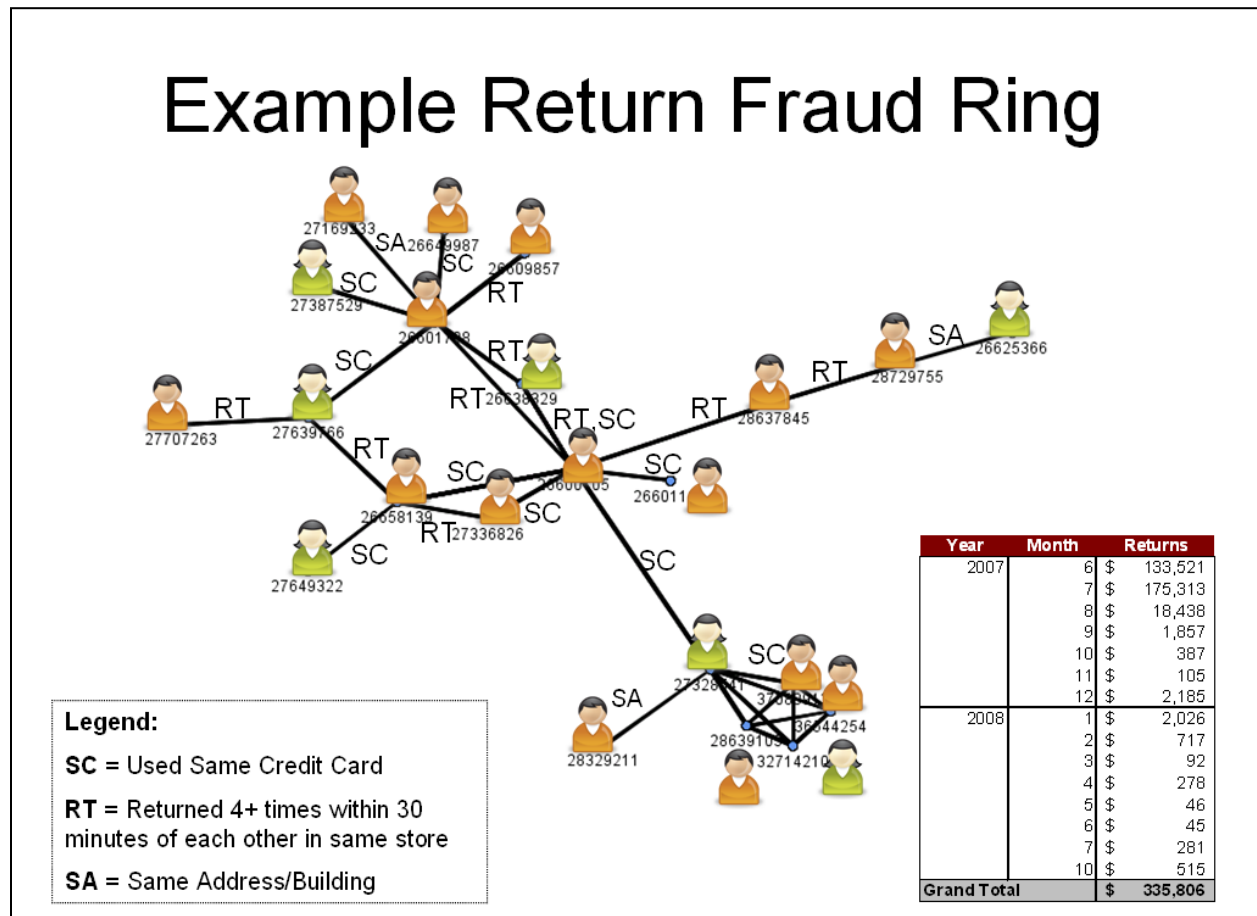
To date, these organized retail criminals have typically been nameless, faceless individuals with no predictable pattern to their fraud. Some retailers have tried to link the offenders by reviewing incident reports or comparing security tapes, while others have made painstaking efforts to train employees on how to recognize behaviors associated with illegal customer activity. Nevertheless, the individual crimes have remained difficult to connect because of their sheer size and scope, and the complexity of the data that could potentially link the individuals.

“An ORC scheme may be as simple as returning stolen items to store service desks for cash refunds or store credit,” said Dr. Read Hayes, director of the Loss Prevention Research Council. “ORC offenders have been caught replacing stolen electronics like iPods with old batteries to simulate product weight, then re-sealing the items and returning them for a refund. Later, unknowing customers may purchase these altered goods, only to return them as well. In these scenarios, retailers not only lose their original goods, they then pay out on two customer refunds or exchanges.”

In the face of this rapidly growing problem, forward-thinking technology providers have worked diligently to pinpoint a reliable system for tracking and predicting retail theft. Now, leading statisticians from The Retail Equation present an automated method that intelligently sifts through customer purchase and return transaction data, providing a way to link individuals and graphically display retail fraud rings.

A simple by-product of The Retail Equation return authorization solution in place at many retailers, this industry-first visualization tool has the potential to revolutionize organized retail crime prevention. The tool applies advanced yet user-friendly graphics to customer identification data already collected during a return, assisting retailers in the following three ways: 1.) as an evidence source that such organized crime ring is impacting that chain; 2.) as a means to measure the size of the impact; and 3.) ultimately to help determine patterns and predict future instances of premeditated theft.

One major retailer in New York City has already reaped the benefits of this graphical solution. In the attached image, where orange and green icons signify individually identified and known shoppers at point-of-sale, advanced algorithms linked customers making merchandise returns who: 1.) used the same credit card (SC); 2.) returned merchandise four or more times within 30 minutes of each other, in the same store (RT); and 3.) lived in the same building or had the same residential address (SA).



Caption: Graphic automatically created by advanced algorithms to help identify and reduce ORC.

As indicated in the graphic, numerous individuals were automatically connected by a statistical analytics model and plotted by the criteria listed above. While viewed separately these individual associations may have appeared insignificant, as a *whole* they painted a broader picture of

ongoing fraudulent behavior. Through these findings, the retailer not only discovered it had fallen victim to return fraud, but ultimately identified and incarcerated members of a booming organized crime ring operating actively and successfully in New York. In addition, the chart below and to the right of the graphic shows that return dollars peaked at \$175,313 in July—and then dropped dramatically to \$18,438 in August when the store adopted the new return authorization technology (another alternative to rapidly address ORC).

Law enforcement officials often remain hesitant to take action against ORC claims due to a lack of substantiated evidence. In the NRF's 2009 survey, only 38 percent of retailers agreed that police officers, detectives and federal law enforcement understood the complexity and severity of these crimes. But in this case, technology can augment existing staff and help resource-strapped retailers quickly build a solid case backed by comprehensive data analysis. Use of these graphics instantly puts a retailer ahead of the game in combating retail crime, equipping them to deliver hard facts about specific people in fraud rings to the state officials, district attorneys and police officers with the power and authority to stop these crimes.

Without a doubt, today's retailers need to take responsibility for safeguarding their revenue and consider the analytical tools now available to detect organized retail crime, as well as other forms of fraud that affect their bottom line. Businesses need to apply evidence-based asset protection efforts and implement more sophisticated ORC intelligence to deal with both basic and complex, evolving criminal networks and schemes.

By playing their part in the battle against crime and loss, companies can protect their business and also join in communicating the message that ORC offenders *will* be discovered and prosecuted. Modern ORC solutions are both collaborative and individual, and aimed at directly attacking ORC operatives as well as modulating their environment. These advanced technologies can and should be used to measure the size and scope of organized retail crime rings. With innovative, calculable solutions, retailers can efficiently evaluate, validate and even predict a crime problem, and ultimately prepare for thieves—before it's too late.

About the Authors: Chief Statistician Dr. David Speights and Vice President of Marketing Tom Rittman provide executive guidance and management for The Retail Equation, the industry leader in retail transaction optimization solutions. The company's applications use statistical modeling and analytics to predict consumer behavior, and its software-as-a-service delivery enables retailers to achieve significant and measurable return-on-investment. Its solutions are operating in more than 12,000 stores in North America, supporting a diverse retail base of specialty, department, sporting goods, auto parts and more. For more information, visit www.theretailequation.com.