

Armed now with the high correlation between A 12345 and A 22673 and the very strong suspicion now that they are in fact the same person, NetMap is asked to pull up a complete picture of the refund activity of both logon numbers. The picture at right shows all of the registers, transaction types, and actual docket or transaction numbers for both A 12345 and A 22673.

This information tells the investigator exactly what documentation they will need to get in order to either conduct an interview and counselling session with the staff member or to pursue prosecution.

The picture gives the investigator all the details of the different transactions, the time and place they occurred, who was involved, how much was involved. Like many people who are experienced with committing fraud and understand the organisations systems, this individual was careful to avoid being trapped by the normal checks and balances. NetMap's unique relationship mapping techniques were quickly able to discover their activities even though they were below the normal radar screen because the pattern (rather than simply the quantity) of transactions was unusual.

Too many retailers assume their employees are loyal and would not commit fraud. Sadly this is not the case. Studies show that 3 out of 10 staff will steal if the opportunity arises and 70% of internal fraud is committed by staff with more than 4 years of service.

Organised fraudsters cleverly use Point-of-Sale systems to electronically steal billions of dollars from retailers every year. International research shows greater than 50% of retail stock loss or 'shrinkage' involves electronic point of sale theft by staff. Until now it was an impossible task to identify one of the largest and fastest growing drains on retailers' hard earned profits.

Clever fraudsters disguise theft using knowledge of your Point-of-Sale system. Hidden by large volumes of data, all but the most glaring statistical exceptions are invisible. Australia's sophisticated NetMap technology now makes retail fraudsters visible. It quickly detects all the specifics - who stole how much, with which products and external parties, on what date and time, and how they did it.

One major retailer reduced shrinkage by 60% in one store and 40% in another in the first 12 months we ran NetMap on their Point-of-Sale data.

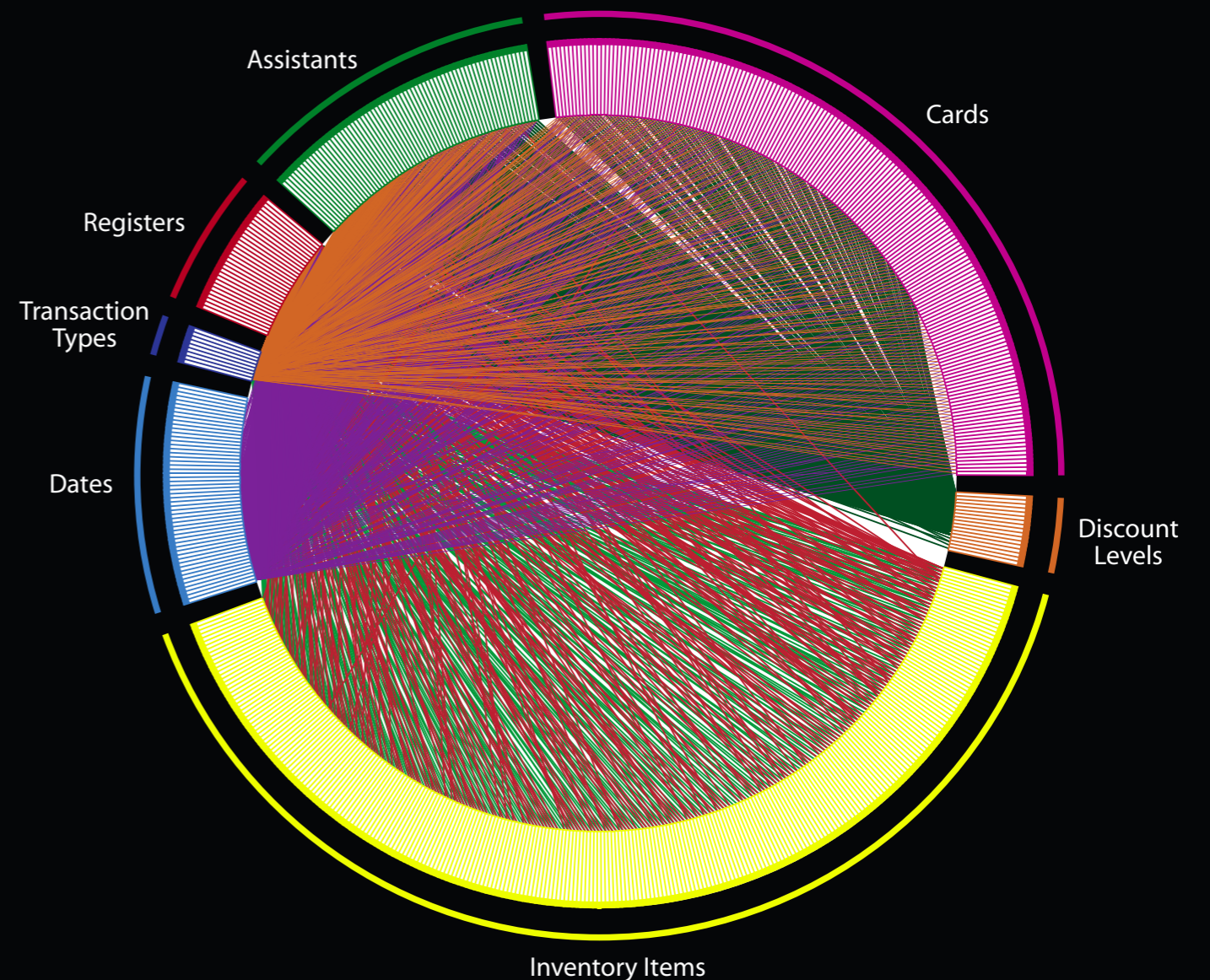
How much fraud would NetMap find in your business?

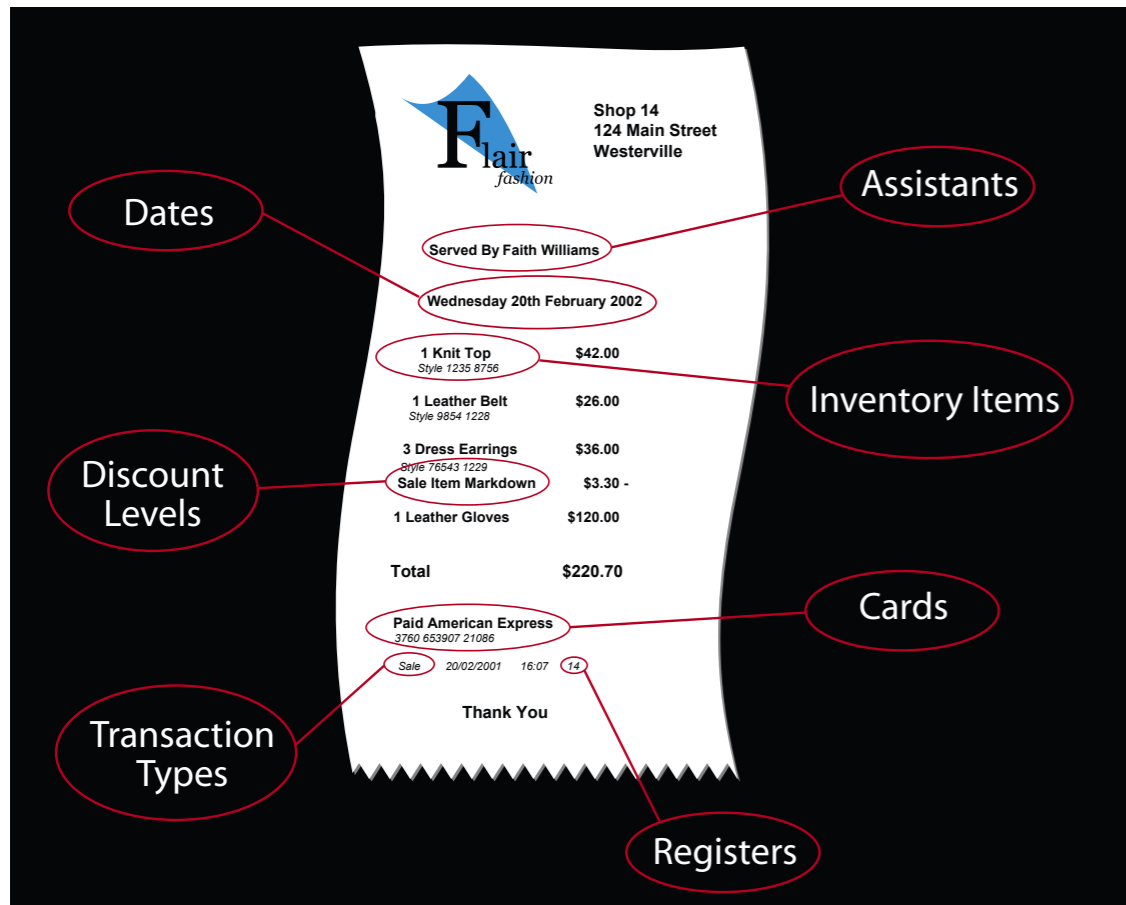
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There is Good Money in Retail Fraud

Is Some of it Yours?

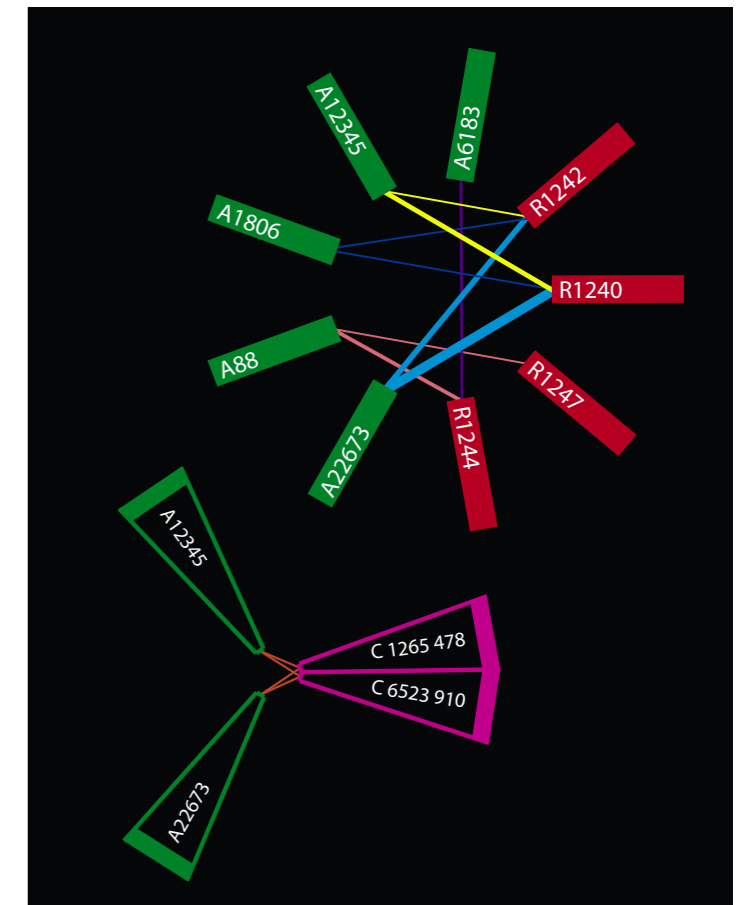




NetMap comes equipped with a wide range of scenarios already built and ready to go to work finding fraud. The diagram below shows the pattern of refunds over a 6 month period. The blue nodes represent each trading week, the red nodes are the different registers involved and the green nodes are the sales assistants.

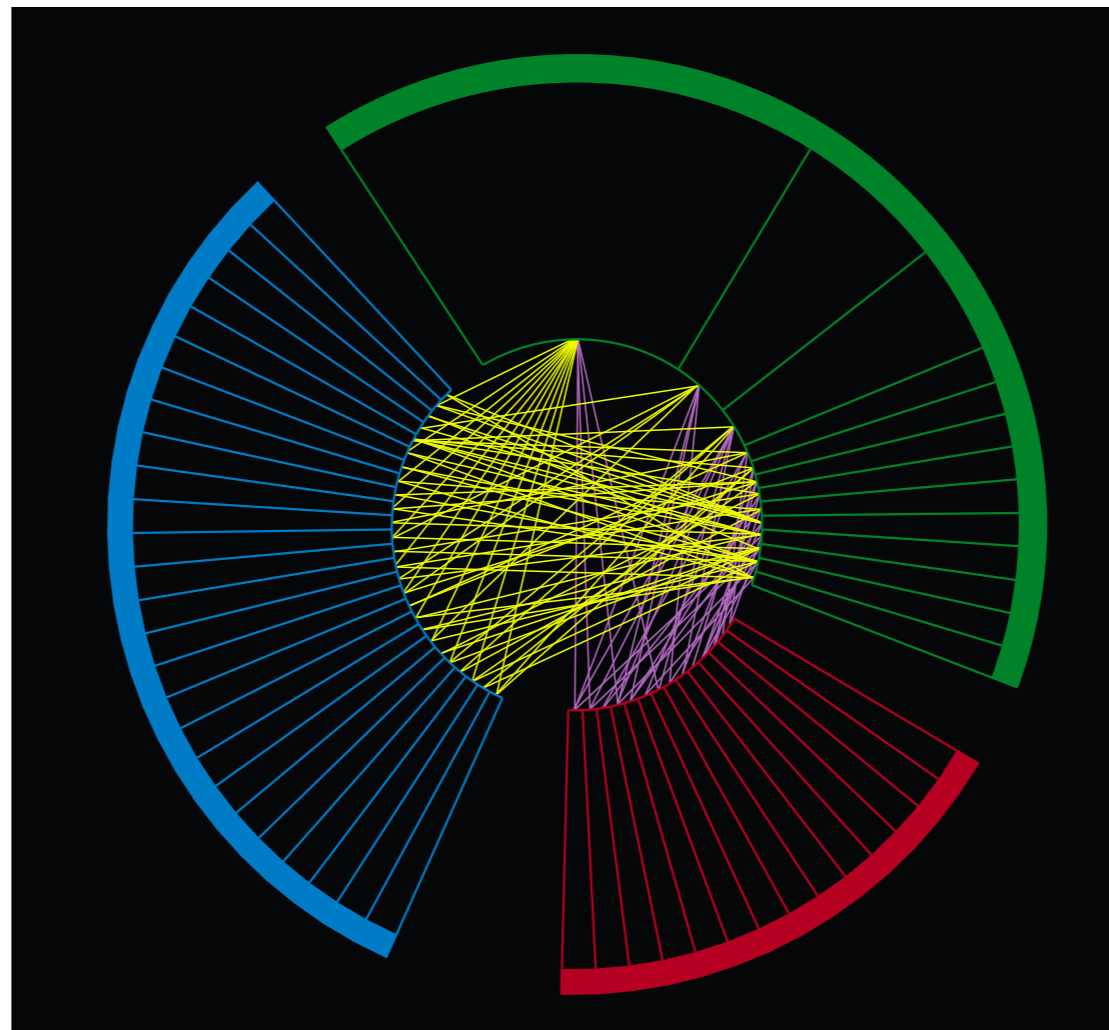
The links show which assistant on which register made returns in which week. The size of the assistant node represents their refund to sale ratio. A high ratio means more refunds than sales. NetMap is a very visual tool and our eye is immediately drawn to the wide node at the top of the diagram. This represents assistant A 12345 who has a much higher level of refunds than sales.

The pattern of links from A 12345 also tells a story. The yellow links to the trading weeks are evenly spaced. They show refunds occurring regularly every 2 weeks like clockwork. No other assistant has patterns like this. Our suspicion is immediately aroused. Further confirmation comes when we realise that A 12345 is a training logon that should not be used in actual trading. The use of this logon is another indicator that someone may be trying to hide something.



To detect retail fraud NetMap takes point-of-sale data and breaks each transaction down into all the elements that are recorded for a transaction. This includes information such as the assistant, the register, any discounts given, the items involved, the date, the method of payment, and the type of transaction. Point-of-sale data may come from a single store for a 6, 12 or even 24 month period or point-of-sale data from different stores can be combined and analysed together. Not every point-of-sale system records all of this information and some record a lot more additional information. NetMap is flexible enough to work with less data than normal and also to include new fields as part of the analysis if they are available.

NetMap processes all of this information to form a complicated pattern of relationships between different registers, staff, dates, transactions types, merchandise types etc. Hidden in this data are patterns of activity that represent fraudulent behaviour. Since 70% of internal fraud is committed by staff with 4 years or more of experience, they understand your point-of-sale systems and are unlikely to commit fraud that can be easily detected. NetMap's sophisticated pattern detection capability is required to detect these people.



The problem now is to discover the real identity of A 12345. Rather than initiating a resource intensive surveillance and interview process we can let NetMap point us in the right direction. It stands to reason that if someone is making fraudulent returns under this training logon they will not want to draw attention to themselves. This means performing the transaction in their normal environment or habitat where they will not be questioned. We can use this to find them. NetMap's emergent group algorithm quickly shows us the group of assistants who regularly perform transactions in the same area as A 12345.

Only 2 other assistant have made refunds on both of the same registers as A 12345, they are A 1806 and A 22673. A quick look at the card details for those refund transactions performed by A 12345 shows that only 2 cards are associated with A 12345. Only 1 other assistant has made refunds to both of these cards, A 22673, one of the assistants involved in the same 2 registers. The target narrows.