

eDreams Puts Fraud to Bed with Quova

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*Pablo Vega
Head of Engineering
eDreams*



The Challenge

With offices spanning Spain and Italy, eDreams is the leading online travel agency in Southern Europe, welcoming more than 500,000 visitors to its Web sites everyday and becoming Europe’s fastest growing e-commerce travel company of the last few years. It offers a wide selection of competitively priced flights, hotels, and holiday packages across its six Web sites: edreams.es, edreams.it, edreams.com, edreams.fr, edreams.pt and edreams.de.

As with the large majority of other online retailers of high-value goods and services, credit card fraud in the travel industry has become an area that has deserved particular attention. Aware of the high costs associated with fraud, eDreams began to build a fraud management platform to combat this threat. Based around a rules engine, the platform was to assess various elements associated with a transaction before creating a score on the risk associated with it.

Critical to the success of the platform and its related rules, was clearly identifying from where, geographically, a user was carrying out a transaction. Pablo Vega, head of engineering, eDreams, explained: “We wanted to find a way in which we could reduce, as much as was feasible, any fraudulent credit card payments during the purchase process on any of our Web sites. By identifying a user’s location, not only could we quickly ascertain whether they were in the same country as that of the registered card owner, but we could also begin to set up specific strategies and rules to minimise fraud from certain countries.”

In the early stages of the platform, eDreams set very tight policies within the rules engine. This had two main effects: reducing fraud to reasonable levels, but sharply increasing the number of transactions that had been incorrectly blocked. eDreams’ second major challenge, therefore, was to maintain a low level of fraud whilst actively reducing the number of transactions it had been blocking—so called “false positives”.



Payment Details

Detailed flight information						
Date	Airport	Terminal	Country	Airline	Operated by	
OUTBOUND Duration of the trip: 10 hours 34 minutes						
Departure 12:21 Mon 6-Apr	San Francisco - San Francisco Intl Airport (SFO)	I	United States	United Airlines	United Airlines	
Arrival 06:55 Tue 7-Apr	London - Heathrow (LHR)	1	United Kingdom & N. Ireland	Class: Economy	Plane: 777	
INBOUND Duration of the trip: 11 hours 9 minutes						
Departure 10:50 Mon 13-Apr	London - Heathrow (LHR)	1	United Kingdom & N. Ireland	United Airlines	United Airlines	
Arrival 13:59 Mon 13-Apr	San Francisco - San Francisco Intl Airport (SFO)	I	United States	Class: Economy	Plane: 777	
Passengers						
Passengers 1	Type Adult	Name john smith	Identity Document Passport	0000000000	UA 000000	
Price						
The price includes promotions: Discount eDreams = \$-2.74				Total price: \$582.82 Taxes and Fees Included		

CASE STUDY

Expert consensus within the fraud management industry estimates that for every fraudulent order that a retailer receives, it rejects almost four orders due to suspicion of fraud. Whilst eDreams knew it could wipe out fraud by locking down rules, the opportunity cost of lost valid transactions would be too high.

In search of a way to tackle these challenges, eDreams turned to IP (Internet protocol) geolocation specialist, Quova.

The Solution

Quova delivers a detailed analysis of nearly two billion IP addresses, growing at a rate of thousands each week. The data, updated automatically on a weekly basis, can locate users to within a specific country or can be broken right down to city level if required. Quova can also identify geographic and network characteristics for IP addresses within each country, including connection type and speed.

Initial tests on a sample of eDreams' historic transaction data showed significant anonymizer activity. Fraudsters use anonymizers to mask their actual location and trick retailers into allowing a transaction to go through. By continually testing for anonymizer activity, eDreams is able to stay one step ahead of fraudsters using this technique. In addition, the hundreds of thousands of transactions analysed showed very different risks associated with certain countries and immediately revealed certain regions as carrying a higher risk profile.

With the Quova data now integrated as a key element within eDreams' fraud platform, the system interrogates the database every time a user starts the purchase process. By analysing which country a user is from and referencing it to information such as cardholder address or travel to/from locations, eDreams creates a risk score for that transaction.

"Quova allowed us to get a view of where in the world our visitors were coming from," commented Vega. "We can now quickly and easily compare this information with the key data provided by the customer during the payment process and automatically trigger alerts when anything suspicious comes up. In addition, the data allows us to set more criteria for our anti-fraud strategy, giving us a greater awareness around each transaction and, therefore, the ability to make a more informed decision."

As part of the implementation phase, Quova specialists carried out a full day's training in Barcelona with both technical and commercial divisions from eDreams, taking the teams through the ins and outs of geolocation and beginning to help optimise rules based on the intricacies of the data.

The Result

It has been a year since eDreams first began using Quova IP geolocation data as part of its fraud management platform and the online travel firm has already witnessed a reduction in fraud of more than 16%.

Alongside the platform, the firm also uses a manual review process to make personal judgements on transactions that may have been blocked, but rated as relatively low risk. Using IP geolocation data, eDreams has been able to reduce the number of blocked transactions that are being passed for manual review because of the increased number of confidence factors used to assess risk.

"Quova has helped us discover which countries are proving to be the most fraudulent. Thanks to this, we have been able to take a fresh view on how we handle transactions from certain parts of the world and ultimately drive down the levels of fraud we had seen in the past," Vega concluded. "We chose Quova because of its reputation in the market as a provider of the most accurate and up-to-date IP data available. We were also impressed that they were able to call in our industry counterparts such as Expedia and Orbitz to consult on our project – this really was above and beyond our expectations for an IT vendor and played a big part in our final decision to choose them."

eDreams expects to increase its use of IP geolocation data look-ups by around 50% in the coming year. In addition, the company is now confident that with an increased level of IP intelligence, it can begin to expand its business into new markets with a better knowledge of the costs associated with it.



About Quova, Inc.

Quova, Inc. enables online businesses to instantly identify where a visitor to their Web site is geographically located. Online companies including broadcasters, e-retailers, ad networks, banks, and government agencies integrate Quova's IP geolocation data into their Web applications to geotarget their advertising and content, detect card-not-present fraud, manage distribution of digital content, comply with local laws, and more. Quova delivers detailed demographic and network characteristic data about an IP address and the data is 99.9% accurate at the country level and up to 98.2% accurate at the US state level (attested to by Pricewaterhouse Coopers). Quova, founded in 2000, is based in Mountain View, California, and is privately owned. www.quova.com

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