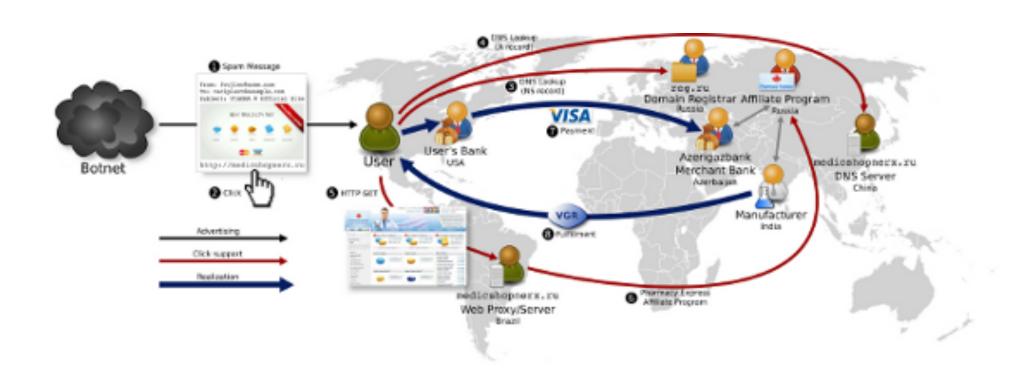
Bullet-Proof Credit Card Payment Processing

Damon McCoy New York University

Joint work with Stephen M. Gaffigan, P.A. and Sean West

Mapping out Dependencies



Merchant Banks (Late 2010)

St. Kitts & Nevis -

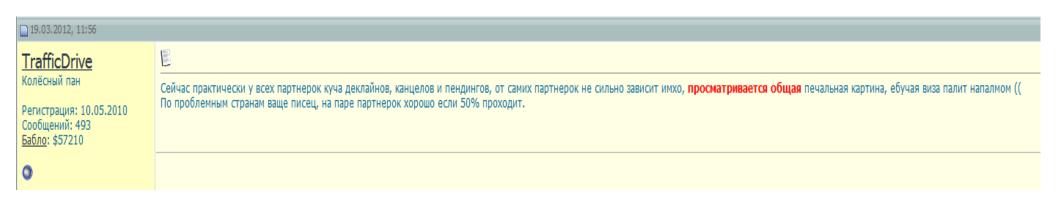
AGBank

DnB NORD

Low diversity

- 3 banks cover 95% of spam
- Fewer banks willing to handle "high-risk" merchants
- High switching cost
 - In-person account creation, due diligence, multiple days...
 - Upfront capital, holdback forfeiture

Levchenko, Pitsillidis, Chachra, Enright, Felegyhazi, Grier, Halvorson, Kanich, Kreibich, Liu, McCoy, Weaver, Paxson, Voelker and Savage, Click Trajectories: End-to-End Analysis of the Spam Value Chain, Oakland 2011



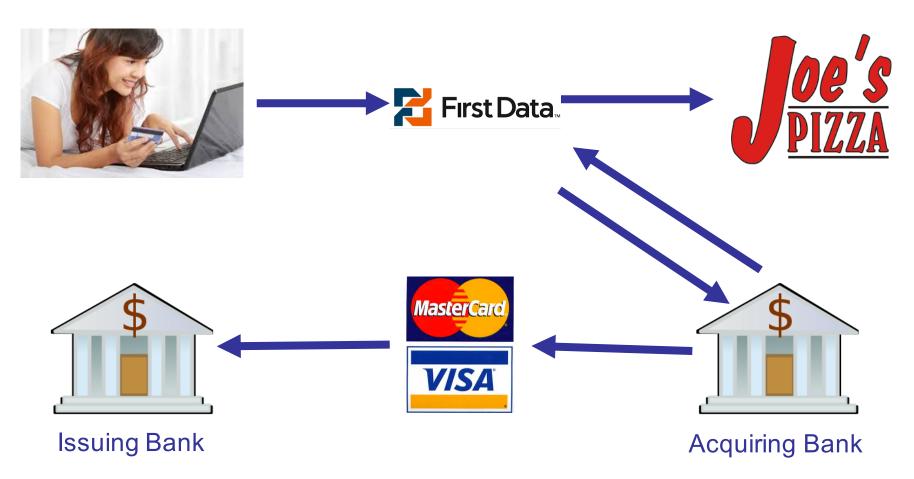
"Right now most affiliate programs have a mass of declines, cancels and pendings, and it doesn't depend much on the program imho, there is a general sad picture, fucking Visa is burning us with napalm (for problematic countries, it's totally fucked, on a couple of programs you're lucky if you get 50% through)."

Luxury Goods Payment Intervention

- STEPHEN M. GAFFIGAN, P.A. and Sean West
- Started on July 9th 2014 with 4 brand holders

Payment Processors

Middlemen between merchants and acquirers

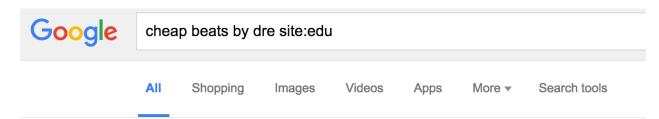


Aside: Trace Purchasing

- Can't provide a URL to Visa/MasterCard
 - They have no mapping between merchant account and URL
- Identifying merchant account requires a trace purchase



Compromised Websites



About 37,400 results (0.38 seconds)

cheap dr dre beats solo headphones - Talladega College

www.talladega.edu/?newbeats-51.html Talladega College v beats by dre warranty email Black Friday · cheap beats by dre solo in blue Black Friday · monster beats by dr. dre studio preisvergleich · monster beats by dre ...

create beat cheap monster cheap beats dr dre dre html ...

www.talladega.edu/?newbeats-3374.html Talladega College ▼ where can i get cheap monster beats Black Friday ... dr dre beats at best buy Black Friday · how long is the warranty on cheap beats by dre Black Friday ...

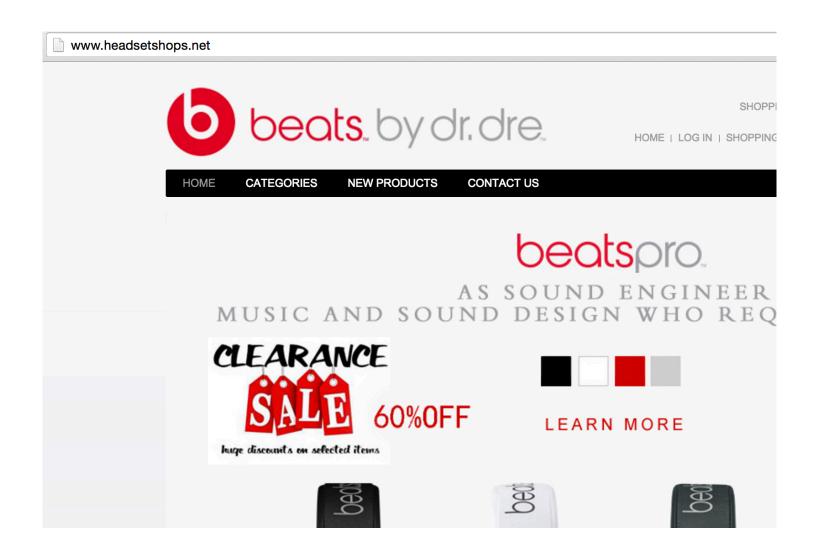
cheap beats by dre studio cheap - Talladega College

www.talladega.edu/studentlife/sl.asp?newbeats-11991... Talladega College ▼ cheap beats by dre studio cheap monster beats by dr. dre studio high-definition headphones intra beats by dre. beats by dre studio battery life Black Friday | dr ...

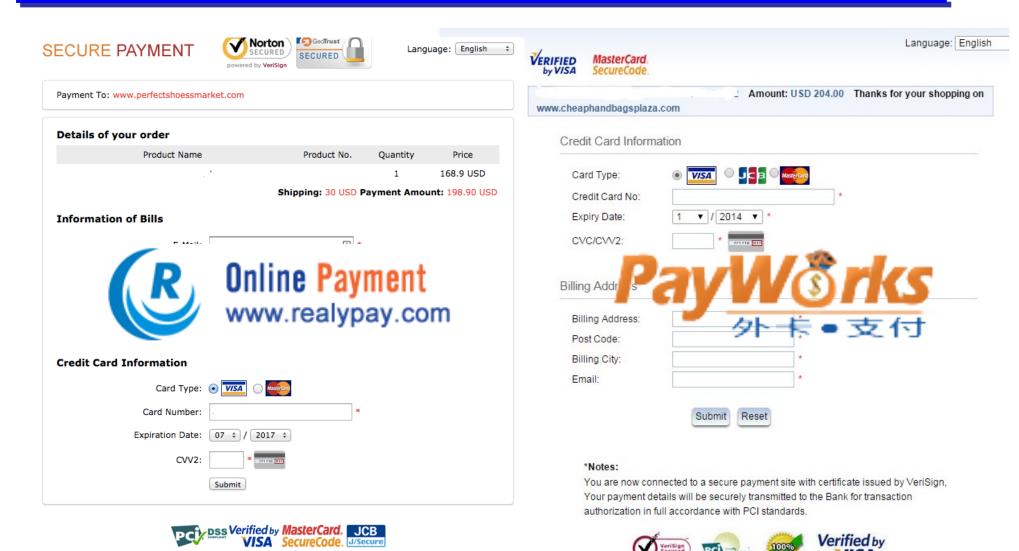
wholesale beats by dre tour Beats by Dre Cheap China

cdli.ucla.edu/?q=news/ZDEzNTk0 ▼ Cuneiform Digital Library Initiative ▼ wholesale beats by dre tour. Wholesale 10pcs monster beats by dr.Dre tour in ear headphone wholesale beats by dre tour for sale.About ioffer sign in register.

Counterfeit Sites



Payment Gateways



1.1

Bullet-Proof Credit Card Payment Processors























全球支付服務提供商

Standard Fraud Detection



Bypassing Fraud Detection



Test Purchase Blocking

- Blacklisting IP addresses, Credit Cards, Billing addresses, and names
 - Easy to change except for name
- Tracking and fingerprinting devices
- Blocking repeat purchasers for certain brands
- Sharing customer information between processors

Larger Network



Test Purchasing Results

- 17 Months
- 3 banks underwrite 97% of accounts
- 15 Payment facilitators
- 313 successful test purchases
- 242 unique merchant accounts
 - All terminated or in the process of being investigated

BP Processing Model



- 5,000 RMB (~\$775 USD) annual fee
- 4-6% transaction fees
- Fines are not passed to merchants
- T + 20 holdback

Banks

97% of accounts underwritten by three banks









Summary

- BP processors aiding spammers by blocking test purchases
- Banks continue to work with BP processors
- Unknown Visa enforcement on repeat offender banks

RealyPay Closed Down

