



TEN
TECH EXEC NETWORKS

10th Anniversary

Keynote Presentation

ISE[®] Central Executive Forum and Awards 2012

June 6, 2012

Heartland Payment Systems
Merchant Fraud – Advances in 21st Century Robbery
John South
Chief Security Officer





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Company Overview



- Publicly traded, NYSE: HPY
- FORTUNE 1000 company
- Fifth largest processor in the US
- Processes close to 11 million transactions a day
- Serves more than 250,000 businesses nationwide
- More than 2,700 employees
- Ten offices throughout the US and Canada





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Company Overview

- Credit/debit/prepaid card processing/micropayments
- E3™ technology
- Payroll services
- Gift marketing and loyalty programs
- Check management
- Online payments
- Give Something Back Network
- K-12 school lunch payments



Heartland
PAYMENT SYSTEMS®

The Highest Standards | The Most Trusted Transactions





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Presentation/Project Overview

- All security operations harden exterior
- Attacks still present where these controls are important
- Today's attacks are also focused on logic attacks - fraud



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Overview of Business Challenge

- When robbery was kinetic crime, clues began immediately on commission of the crime

- Examples



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Overview of Business Challenge





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Overview of Business Challenge





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Overview of Business Challenge



"You know, you can do this just as easily online."



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Overview of Business Challenge

- Digital analog of armed robbery is becoming purview of professional criminal organizations

News

Russian cybercriminals earned \$4.5 billion in 2011

Russian mafia took control and professionalized online crime in 2011, researchers say

http://www.computerworld.com/s/article/9226498/Russian_cybercriminals_earned_4.5_billion_in_2011





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Overview of Business Challenge

“Estimates from academic literature on the losses from economic espionage range so widely as to be meaningless – from **\$2 billion** to **\$400 billion** or more a year – reflecting the scarcity of data and the variety of methods to calculate.

“Foreign Spies Stealing US Economic Secrets in Cyberspace” in Counterintelligence, Office of the National Counterintelligence Executive. Pg 4.





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Overview of Business Challenge

- Cybercrime is a complex beast to comprehend
 - Computer the Instrumentality of the Crime
 - Instrumentality refers to diversion of a lawfully possessed item
 - An instrument, to facilitate committing a crime
 - The processes of the computer, not the contents of computer files, facilitate the crime
 - Computer as Target of Crime
 - The processes of the computer, not the contents of computer files, facilitate the crime
 - Computer Incidental to Other Crimes
 - Computer is not essential for the crime to occur, but it is related to the criminal act
 - Money laundering and unlawful banking transactions



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Overview of Business Challenge

C H E W

y	a	s	a
b	c	p	r
e	t	i	f
r	i	o	a
c	v	n	r
r	i	a	e
i	s	g	
m	m	e	
e			





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Project Scope/Goals

- December, 2010
 - Identified certain fraudulent transactions from merchant accounts
 - Amounted to approximately \$500,000
- Indicators
 - Multiple merchants
 - Same IP address
- Goal – Stop or reduce fraud associated with merchant accounts





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Lessons Learned/Best Practices

- The fraud patterns evolved over time as fraudsters reacted to our mitigation activities
 - Refund fraud only
 - Net zero batches
 - Complex timing frauds
- In all cases, they were working from compromised merchant accounts





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Lessons Learned/Best Practices

- Response to these actions required four bodies to participate
 - Heartland Security and Fraud groups
 - Merchants
 - Law Enforcement
 - Payment Processors Information Sharing Council



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Lessons Learned/Best Practices

- Account take-over is a prevalent problem in financial services industry
- Successful account take-over is quite distressful for account holders
- Mitigation of an account is often extremely expensive and time consuming for victims





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Lessons Learned/Best Practices

- Going forward
 - We continue to engage merchant in educational awareness about risks and compliance
 - We continue tweak fraud parameters to catch ever more sophisticated fraud transactions
 - We continue engage industry in better and faster intelligence





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Questions?

