



## E-Commerce Anti-Fraud Using Internet Address Verification Service (I-AVS)

VERIFY AND TRUST

**Introducing a secure and seamless system to provide Internet, physical address verification of all parties in an e-commerce transaction.**

### News Headlines

**“Online Fraud Costs \$2.6 billion This Year”**

*MSNBC, 11/11/04*

**“ Banks Sound Alarm On Online Fraud”**

*BBC News, 10/01/04*

**“Online Fraud Rife In The U.S.”**

*The Register, 03/07/01*

**“E-Theft: Who’s Liable?”**

*Interactive Week, 08/13/01*

**“Paranoid Lately? You May Have Good Reason”**

*The New York Times, 04/01/01*

**“ Online Fraud Fighters”**

*Information Week, 01/28/02*

**“Net Fraud Study”**

*The New York Times, 01/27/05*

**“High fraud rates continue to plague electronic commerce**

**Web sites...”**

*MSNBC*

*November 11, 2004*

### Online And Credit Card Anti-Fraud Challenges

**“Banks have been soft and slow in dealing with credit card fraud”,**  
“Chipping Away”, The Economist, July 31<sup>st</sup> 2003

1. Lucrative and easy form of fraud.
2. Risk of being caught is small.
3. High interest rates used to reclaim fraud losses.
4. Smart card technology would cost billions to implement at POS.

**“Online fraud costs \$2.6 billion this year”,** MSNBC, November 11<sup>th</sup> 2004

1. High fraud rates continue to plague electronic commerce Web sites.
2. Merchants are rejecting a far higher percentage of suspicious orders, which translates into lost sales.
3. 6% of all online sales are rejected, an increase of over 30% from the previous year.
4. Current automated tools are not helping in preventing online fraud.

## Solution (Patented)

The Internet Physical Address Verification System (I-AVS) consists of a trusted third party working in partnership with all participating Internet Service Providers to maintain a secure database that details all parties connected to the Internet.

The database contains information confirming the physical location from where a party has connected to the Internet, and is authorized to participate in a secure transaction.

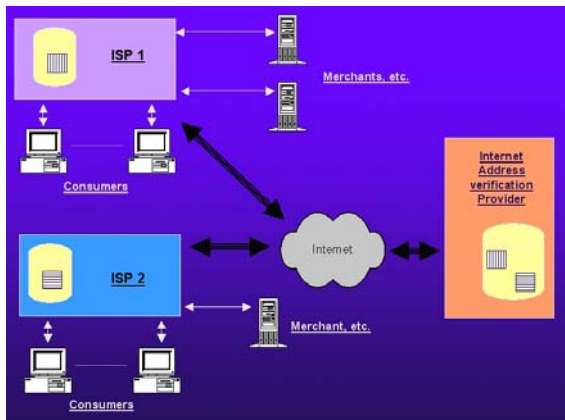
## Technology Overview

The patented I-AVS solution is similar in principal to anti-fraud measures used in today's Mail Order / Telephone Order business and issuance of new credit cards.

The key is to clearly identify all parties in the business transaction.

I-AVS taps into data that is collected by all ISPs in an IETF standard database called RADIUS.

Pertinent RADIUS information is similar to caller ID data collected by a telephone company.



## Advantages

This technology provides an implementable solution, using available technology, to answer many of the fraud challenges facing both online consumers and online businesses.

Feature	Benefit
Pre-registration	<ul style="list-style-type: none"> <li>◦ User determines physical locations from which to transact online business</li> </ul>
Trusted 3rd Party	<ul style="list-style-type: none"> <li>◦ Coordinates data collected from many ISPs</li> <li>◦ Provides verification services to all transaction parties</li> <li>◦ Provides encrypted irrefutable verification of all transaction parties.</li> </ul>
Transaction parties verification	<ul style="list-style-type: none"> <li>◦ Uses ISP data to verify that transaction parties are logged on to the Internet, at their registered locations</li> <li>◦ Reduces fraud by imposters at all ends of a business transaction</li> </ul>

***"This is a major concern for us. We want to make sure that the trust relationship remains between the consumer and the financial institution."***

*Sr. VP of Global Security & Risk Services,  
Mastercard, Purchase, N.Y.*

## Online Fraud Statistics

- \$2.6 billion estimated stolen in 2004<sup>1</sup>
- Annual fraud increase \$700 million<sup>1</sup>
- 6% of all orders are rejected<sup>1</sup>
- Annual increase of 33% in order rejections<sup>1</sup>
- US consumers use credit cards to buy \$2.2 trillion of goods and services annually.<sup>2</sup>
- Credit card purchases account for 20% of GDP in the USA.<sup>3</sup>
- In 2003 Citigroup issued 145 million credit cards.<sup>3</sup>
- In 2003 Citigroup earned \$19 billion in credit card revenues, 25% of its total.<sup>3</sup>
- 33% of the \$91 billion market for managed business travel is done online<sup>4</sup>.

<sup>1</sup>MSNBC, Nov. 11, 2004

<sup>2</sup>"As Cash Fades, America Becomes A Plastic Nation", The WSJ (07/23/04)

<sup>3</sup>"Just One Word: Plastic", FORTUNE (Feb. 9, 2004)

<sup>4</sup>"Travel Manager's Lament", The New York Times (08/16/05)

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