



# Securing Electronic Identities

Smart Card Alliance Mid-Winter Conference

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# e-Payment Authentication Company

- **Founded:** 1997, located in Santa Clara, CA
- **Solutions:** **WebFort™** and **TransFort™**  
Strong Authentication Solutions
- **Innovations:** **ArcotID Software Smart Card™**  
using Cryptographic Camouflage

Architect of **3-D Secure** for Verified by Visa and MasterCard® SecureCode™

- **Investors:** Accel Partners, Goldman Sachs, Onset Ventures, Visa International Novell, Wachovia and Oracle



# The Problem...

- **Online fraud order of magnitude greater**
- **Estimated \$1 Billion lost annually**
- **Fraud growing faster than e-commerce**
- **Merchant absorbs chargeback costs**
- **Credit card security shoppers #1 concern**



# 3-D Secure Protocol

- Authored by Visa with support from Arcot; first production implementation was June 2000
- Designed to confirm to the participating e-merchant that the online buyer is the actual cardholder
- Quickly becoming industry standard, used by both the Verified by Visa and MasterCard® SecureCode™
- Arcot Selected by over 90% of financial institutions and merchants deploying a 3-D Secure solution today





# So...what's next.....

Today's 3-D Secure solutions are mostly focused on implementing Passwords otherwise known as “one factor” authentication solutions!

Password based systems are much better than nothing....! However they are inherently insecure as well.... some well documented reasons are:

- **Weak passwords**
- **Shoulder surfing**
- **Password caching**
- **Bait applications**
- **Keystroke recording**
- **Password sharing**
- **Dictionary attacks**
- **Weak transport**



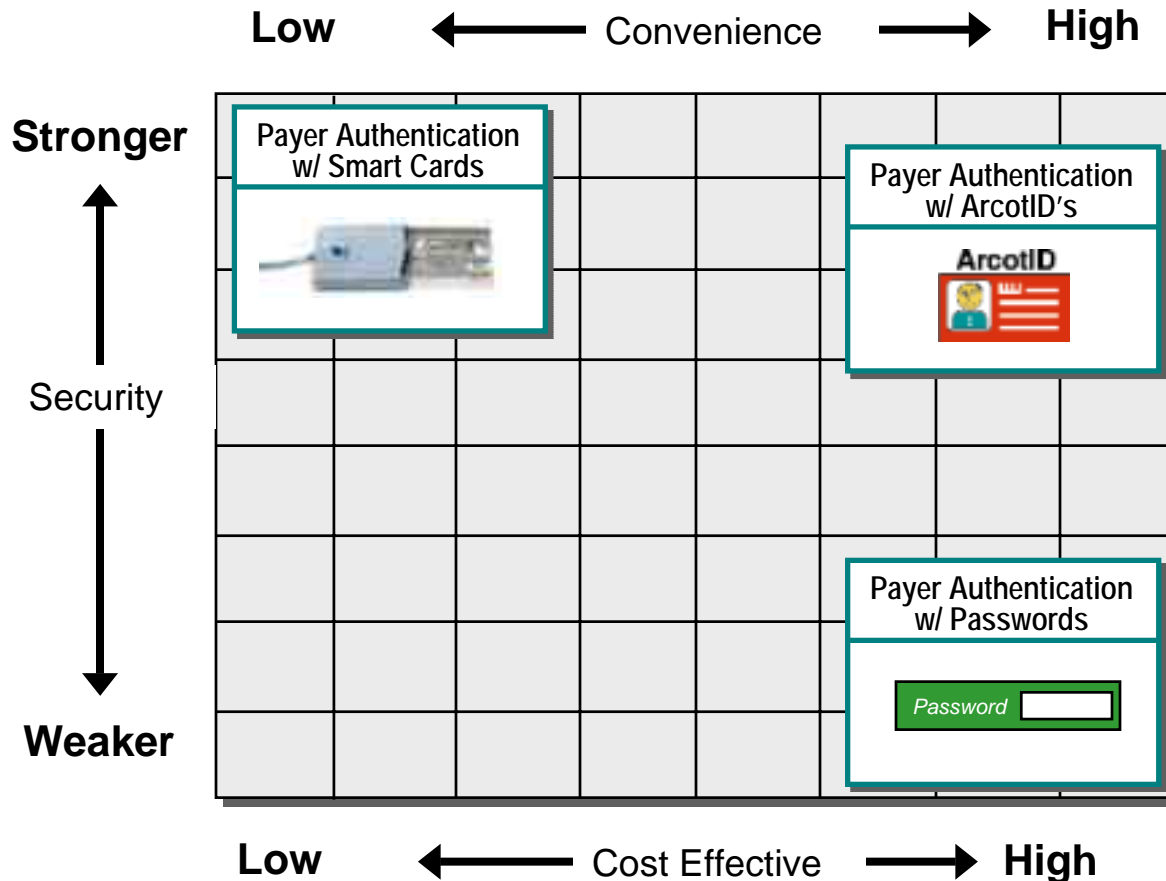
# The future.....

**The future will require better security and require “two factor” authentication solutions that may come in the form of “smart cards” or “software smart cards”.**



# Here are the choices...

Arcot is the only solution that provides purchase and identity security that is cost effective for large deployments of consumers





# ArcotID™ Software Smart Card

## Strong Authentication and Secure Signing

- Hardware-strength security
- Simple mass deployment
- Tamper-proof private key
- Multiple devices
- PKI standard signing
- No breakage or loss







# The Advantage of Software

	User Friendly	Strong Security	Portable	Low Admin	Digital Signing
<b>Username Password</b>	✓		✓		
<b>Digital Certificate</b>			✓		✓
<b>HW Token</b>		✓	✓		
<b>Smart Card</b>		✓			✓
<b>ArcotID</b> Software Smart Card	✓	✓	✓	✓	✓