

Biometrics and Financial Services – Show Me the Money!

BY C. MAXINE MOST

The biometrics industry has targeted financial services as one of the key markets poised for explosive growth. Fully integrated biometrically enabled financial service systems that efficiently and conveniently serve millions are, however, not quite on the horizon.

The core biometric technology is “good enough” today to achieve significant business process improvement and enhance end user convenience. However, the likely trend is that biometrics penetration in financial services will continue on its current path of pilots, tests and limited point based application for some time as financial service organizations are notoriously late adopters of emerging technology,

The development and deployment of fully integrated biometric-enabled financial systems is a long-term proposition that will be based on incremental improvements in technology; accuracy, reliability, processing speed, durability, and usability, resolution of some of the large scale system integration issues and financial services market dynamics that create excruciating points of pain in relation to identity and authentication. In two to three years time, significant progress should be made on all fronts and, along with an improved global economic outlook, should begin to open the floodgates for biometrics integration within the financial services industry.

In the meantime, immediate market progress will be limited to those point



Deployments - This deployments list is not intended to present a comprehensive view, but rather an indication of the scope and depth of biometrics applications within the financial services arena. Most, if not all, major financial sector players are testing biometrics. However, many are unwilling to report on pilot programs or deployments.

CUSTOMER FACING APPLICATIONS

Biometric	Companies	Customer	Application	Location
Face	GCA, Infonex, Viisage	Harrah's Casinos, Las Vegas	ATM - ACM Cash Machines	USA
Finger	BioPay	Duthler Family Food	Check Cashing	USA
Finger	BioPay	BI-LO	Check Cashing	USA
Finger	BAC	Kroger	POS	USA
Finger	Identix	Grupo Financiero Banorte	ATM	Mexico
Finger	Identix	Banco Falabella	ATM, Teller Windows, Credit Cards	Chile
Finger	Indivos (now Soidus)	Thriftway	POS	USA
Finger	SAFLINK, Real-Time Data Mgmt	Huston Municipal	Kiosk - Credit union	USA
Finger	SAFLINK, Real-Time Data Mgmt	Riverside Health Systems	Kiosk - Credit Union	USA
Finger	SAFLINK, Real-Time Data Mgmt	Purdue Employees	Kiosk - Credit Union	USA
Finger	SAFLINK, Real-Time Data Mgmt.	First Financial	Kiosk - Credit Union	USA
Finger	SAFLINK, Unisys	Western Bank	Account Access - Teller, ATM, online	Puerto Rico
Finger, Hand	RSI, Diebold	Zion First National Bank	Access Vault (Safe Deposit)	USA
Finger, Hand	RSI, Diebold	Bank of Hawaii	Access Vault (Safe Deposit)	USA
Finger, Hand	RSI, Diebold	First Tennessee Bank	Access Vault (Safe Deposit)	USA
Signature	CIC	Charles Schwab	Account Application	USA
Signature	CIC	American General Life & Accident	Document processing	USA
Signature	CIC	First American Bank	Document processing	USA
Signature	CIC	National Health Insurance Co	Policy Application & Enrollment	USA
Signature	CIC, Interlink	Charles Schwab	Document processing	USA
Signature	CIC, Interlink	Prudential Financial	Document processing	USA
Signature	Cyber-Sign	Western Bank	Financial transactions	USA
Signature	Security Biometrics	Barton Insurance	work flow automation, web access	Canada
Signature	Wondernet	Bank Hapoalim	Financial transactions	Israel
Voice	Nuance, GMK Electronics Ltd.	Banco Bradesco	Account Access - PIN/PW reset	Brazil
Voice	Persay	First Direct Bank	Account Access - pin/PW reset	Israel
Voice	T-NETIX (Now Speechworks)	InTrust Bank	Transactions - Bank	USA
Voice	VoiceVault	Progressive Insurance	Call Center - PIN/Password Reset	USA
Voice	VoiceVault	Buywayz	Transactions	Ireland

EMPLOYEE FACING APPLICATIONS

Biometric	Companies	Customer	Application	Location
Finger	Bioscrypt	E*Trade	Secure Access	USA
Finger	Bioscrypt, HID, ADT	American Express	Physical Access	USA
Finger	Cavio, Verdicom	ChemMatch.com	Transactions - Commodity Exchange	USA
Finger	Identix	Bank of Cairo	Transactions	Egypt
Finger	Identix	Conviri Bank	Transactions	Columbia
Finger	Identix	Bank of Central Asia	Teller Verification	Indonesia
Finger	Identix	Bank OF Costa Rica	Secure Access	Costa Rica
Finger	SAFLINK, Precise Biometrics	Unnamed Fortune 50 Lending Inst.	Employee access	USA
Signature	CIC	Chase Manhattan & Ginnie Mae	Document processing	USA
Signature	CIC	Industrial & commercial Bank	Workflow automation	China
Signature	CIC, Florentis, MotionTouch	Nationwide Building Society	Document processing	UK
Finger	Digital Persona	California Commerce Bank	Network Access	USA
Finger	Identix	Mellon Bank	Background Check	USA90



solutions where biometrics demonstrate reliability, quantifiable ROI and a proven track record of real-world operational performance.

Customer Acceptance is Not a Problem

Interestingly, one issue that appears to be a non-issue is consumer acceptance of biometrics. This is especially true at the point of sale. Several vendors have taken biometrics directly to consumers in retail applications and much to the surprise of many industry pundits and privacy advocates alike, consumers are responding with curiosity and enthusiasm.

From iris scan ATMs to finger-scan supermarket checkout, intrigue unquestionably outweighs fear as consumers clamor for the opportunity to enroll in pilots and deployments. In one early 1998 bank pilot in Texas, 80 percent of customers who could use iris scan ATMs did. Ninety-five percent of these customers said they were satisfied and 35 percent said they had opened accounts specifically because of the biometric ATMs. So why haven't biometrics been widely deployed in these and other customer facing applications?

The primary obstacles to rapid uptake of biometrics are the cost and complexity of deployments. These issues include legacy systems integration, enrollment infrastructure, privacy concerns, database storage and replication, identification and authentication management, interoperability and standards. As with most industry sectors evaluating biometrics, the most successful financial service pilots and deployments have been small-scale, closed-loop applications. And most often, after a successful pilot, the decision not to deploy is made because



of one or more of the primary obstacles mentioned above.

For example, after comprehensive testing, German public savings banks decided against the adoption of biometrics in ATMs. While customer acceptance was high, difficulties in meeting privacy and data protection requirements and the lack of standardization hindering national and international rollouts outweighed the perceived benefits to be gained from deployment.

Conversely, part of the drive within financial services towards biometrics is based on the urgent need to leverage potential efficiencies of existing IT infrastructure investments –particularly for e-commerce and the Internet - while decreasing costs. In order to drive down operation costs, financial service organizations must reduce the cost of each customer interaction. Customer self-service is the key and strong authentication is essential to this process. As self-service increases, strong authentication becomes increasingly more cumbersome for each individual and biometrics as an alternative to pins, passwords and tokens becomes ever more appealing.

Internal Use Will Come First

Financial industry analysts suggest that widespread internal use of biometrics for employee-facing applications, will likely precede roll-outs of large-scale, customer-facing deploy-

ments. It is possible, however, that effective deployment of biometrics at the point of sale (POS) may pressure some sectors of the industry to deploy customer-facing applications sooner. Market acceptance of POS applications has been overwhelmingly positive. If consumers continue to demonstrate a willingness—and in many cases a preference—for biometric POS interaction, retailers may proactively seek out the technology to achieve a competitive edge, forcing more conservative elements of the financial services infrastructure join the party. Customer-facing applications in the form of POS may actually be a driving force in wide scale adoption of biometrics.

While traditional biometric vendors – sensor, algorithm and device manufacturers – continue to focus on improving the speed, accuracy and durability of their products, a new class of biometrics players is emerging to provide targeted authentication solutions for the financial services industry. The imminent consolidation of biometrics core technology providers offers a stark contrast to the growing number of these biometrics application solutions providers.

Niches Where Biometrics Are Deploying

Established vendors and new entrants alike have identified niches where biometrics provide a unique solution to an otherwise unwieldy or unsolvable financial

service sector problem. A review of several of these market innovations follows.

Kiosk-Based Banking – Real-Time Data Management Systems and SAFLINK have a long-standing relationship to provide credit unions with full-service kiosks that essentially act as self-service branch facilities. Credit Union customers can open accounts, cash checks, apply for loans and make CD and IRA deposits. The kiosks enable Credit Unions to leverage opportunities for new membership at locations that are lucrative but which cannot cost-justify the establishment of a new branch. They also provide 24-hour service for customers who cannot access branches during regular business hours. Customer satisfaction levels have been extremely high for Credit Unions that have deployed these kiosks (See Deployment Chart).

Retail Point Of Sale (POS) – In the US more than 500 million checks are forged each year. Herndon, Virginia based BioPay is addressing this issue with a biometric a finger scan system that allows retail merchants to share negative customer financial transaction information in real time, significantly reducing risk of “bad check” acceptance. The company’s initial focus has been in the convenience store market where check cashing offers a lucrative business opportunity as long as fraud can be contained. BioPay is beginning to see momentum in this market. To date more than 4.5 million check-cashing transactions worth more than \$2 billion have been completed using their systems. In addition, BioPay recently announced that BI-LO, a supermarket operator with 300 locations in the Carolinas, Georgia and Tennessee will install the check cashing system in 176 locations.

Another company that has begun to achieve measurable success with

POS based applications in Biometrics Access Corporation (BAC). BAC has been working with Kroger’s supermarket chain in Texas. Customers link their finger scan to any number of payment vehicles including ATM, ACH or credit cards and with the use of a pin or by swiping an identifying card, can select their method of payment for groceries.. BAC reports tremendous success in terms of achieving high levels of consumer acceptance and satisfaction and demonstrable ROI for the supermarket operator in terms of payment processing speed, reduction in check fraud, time pre consumer checkout and overall paperwork reduction.

Consumer Enrollment – Morpheus Technologies, a new entrant in the biometrics arena, is addressing widespread biometrics enrollment processing, a critical systems infrastructure issue. Morpheus believes that the rampant spread of identity theft will be a major factor in the acceleration of biometrics adoption and that consumers will be unwilling to accept the inconvenience and

potential privacy and security issues associated with enrolling their biometrics with dozens of retail merchants. The company plans to develop a network of secure, licensed biometrics enrollment and management facilities that will speed this process. The company will establish a central repository for biometrics templates offering participating consumers two major benefits: convenience and privacy. Consumers will only need to enroll their biometric data at one location and they can then control the release and withdrawal of this personal data to financial, credit card and retail organizations at their discretion.

Summarizing The Trend

Mainstream use of biometrics within financial services appears to be on a measured path towards widespread adoption. As the repertoire of successful deployments increases, so too will industry comfort and consumer acceptance. The breadth and depth of applications will expand as biometrics will no doubt become a ubiquitous component of our financial services infrastructure. From authenticating high security multimillion-dollar inter-bank transfers to accessing our local savings bank accounts to the weekly purchase of groceries at the supermarket, personal identification and transaction processing through biometrics will become as familiar and trusted as displaying a drivers license or making a purchase with an ATM card. ■

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