

REPORT ON SMART CARDS™

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The Worldwide Deployment of Smart Cards and Related Technologies

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Inside This Issue:

Making Contact: RSC Insider Interview Jekowsky Sees Smart Cards As Key to M-Commerce	3
Schlumberger to Acquire Bull Smart Cards Activities	5
VA Issuing Express Card To Veterans in Chicago	6
ABA Develops Policy For Digital Certificates	7
SIMalliance Group Adds Bull, Graphium Danmark	9
Proton Expands Services In America, Eastern Europe	10
Firms Tout Portability, Security of New Readers	12
Items of Interest	14

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Transit Authority in Rome Links Smart Cards to Bus, Rail, Tram

Commuters in Rome, Italy, now can use contactless smart cards to pay the fare for various modes of transportation, including bus, rail and tram. The new transit card program stems from a nine-year contract that ATAC, the public transport authority for the city, awarded in 1999 to the ERG Motorola Alliance (RSC, July 12, 1999, p. 1).

ATAC expects to issue 350,000 smart cards by July and more than 1 million cards by the end of the year. "With the introduction of the new system, we put the most advanced innovation at the disposal of the majority of Romans," ATAC President Mario Di Carlo said.

The system supports all of the operators providing bus, tram, train and underground services within Rome and nearby Lazio. The system includes the smart cards, 4,000 point-of-sale (POS) devices, 200 portable card readers, depot and station computers, a communications system, central computer network, card issuance center and maintenance support.

"The delivery schedule in Rome has been very short, and to implement such a large-scale system in 16 months is a great achievement and demonstrates the close collaboration between the customer and the ERG Motorola Alliance," said Peter Fogarty, chief executive officer of ERG. "We look forward to extending the system across other parts of Italy and in working with ATAC to progressively extend and upgrade the public transport network in Rome and Lazio."

Along with using the smart cards, the system also allows ATAC to issue paper tickets securely for single-ride and short-term tickets throughout Rome. "Starting today, commuters in Rome will experience the most technologically advanced ticketing system in Europe," said David Jones, vice president and director of system

Multiapplication Cards • Regulations • Pilots • Stored Value Cards
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SMART CARD FORUM, SCIA TO BECOME SMART CARD ALLIANCE

Two key North American smart card organizations this month expect to become one group – the Smart Card Alliance (SCA) – promoting the adoption and advancement of smart card technology. The board of directors of the Smart Card Forum (SCF) and Smart Card Industry Association (SCIA) have agreed to the alliance, and will seek approval from their memberships when they meet Jan. 10 in Miami, Fla.

“We saw we had a lot in common,” Donna Farmer, SCF president and chief executive officer, told RSC. Farmer will retain the same title for SCA. “Both groups are looking at issues to move the industry forward,” she added. “The smart card market in North America is exploding, and we’re looking to bring everyone together in a unified fashion. This will be a common area for those grappling with issues such as interoperability to reach out to. Now they have one group on which to focus their attentions and energies.”

The organizations expect the expanded membership and resources to help SCA accomplish its goals, which include increasing smart cards’ role in applications such as network security, financial transactions, mobile communications, health care, transportation and government operations. SCA will include more than 224 member organizations.

“This is a very exciting time for smart card applications,” said SCF Chairman Allen Gilstrap of American Express Corp.’s global network services and SCA chairman-designate. “With the unified organization, we can provide a wide range of services and the latest information to our members.”

While SCIA members include mostly smart card manufacturers, SCF includes manufacturers, users and other organizations interested in the future of smart cards. Among the initial SCA projects planned for 2001: surveying the U.S. smart card market; rolling out its Smart Card Network Security Initiative (RSC, Sept. 25, 2000, p. 5); launching a comprehensive reference Web site (<http://www.smartcardalliance.org>); continuing SCF’s 6-year-old Educational Institute; and meeting quarterly on specific topics.

A permanent committee of the alliance – the vendor council – will comprise principal members of the technology provider sector. It will develop and implement projects touting smart cards and SCA’s goals, beginning with the security initiative.

“The alliance’s network security initiative is a key priority to firmly establish smart cards as the centerpiece of network and e-commerce security in the U.S. and the world,” said SCIA Chairman Paul Beverly of Schlumberger Ltd. and SCA vice chairman-designate. “We need to break down any and all barriers that exist in the market. With representatives from the nation’s major companies uniting in this new organization, we will be able fulfill our goals in achieving the widespread use of smart cards.”

Existing SCF and SCIA members automatically will convert to SCA principal, auditing, educational or government memberships for 2001. The alliance’s board of directors will include members of both the SCIA and SCF boards. The first formal SCA meeting will be Feb. 26-March 1 in Salt Lake City, Utah.

Smart Card Forum: Contact Donna Carlucci. Phone: +1 212-837-7791. <http://www.smartcardforum.org>

solutions for the Motorola worldwide smart card solutions division. “People on the move will love the ‘touch and go’ simplicity of contactless smart cards for fare passes.”

In another transit matter, PEP Bank, the South African licensee of Proton World’s VISA Cash smart card system, recently began issuing some 25,000 Proton-based VISA Cash cards for consumers to use in a pilot program with Metro-rail, the Cape Province regional railway company.

The cards enable riders to buy railway tickets at two stations, and to make purchases in shops

near one of the stations. They can reload the cards at kiosks in the stations, and PEP Bank account holders also can load the cards at PEP Bank automated teller machines.

The system includes a Microsoft Corp. Windows/NT host server, 10 unattended load kiosks from Xafax Nederland BV, 20 ticket-purchasing machines from Antenor and 35 retail POS terminals from Banksys. PEP bank will run the pilot program using the card this year, and will re-evaluate it later to determine if it will add

See TRANSIT, p. 15

Making Contact: RSC Insider Interview

Jekowsky Sees Smart Cards As Key to M-Commerce

This is the 34th installment in a series of monthly interviews with influential and insightful players in the smart card community. The series addresses relevant issues, industry trends, consumer barriers and arenas for making profits. This month, RSC Editor Jerry Ashworth wrote about his talk with Ira Jekowsky, senior vice president for strategic relations in North America and chief strategy officer for Funge Systems Inc.

Few could have imagined 10 years ago that consumers could turn to their computers as devices for buying items ranging from books to cars. In the early 1990s, there was no real infrastructure to enable this, as companies developed their business models around the prevailing business channels. As technology continues to change, Funge Systems Inc. is aiming for what it believes will be the next business model – the convergence of the Internet, electronic commerce, mobile commerce (m-commerce) and the smart card.

Ira Jekowsky, senior vice president for strategic relations in North America and chief strategy officer for Funge, told *RSC* that in the next five years, consumers could be carrying around Internet-enabled devices that combine the powers of a personal computer (PC), personal digital assistant (PDA) and mobile phone in one mobile device.

“People will begin to conduct their affairs through these devices and the need for security and authentication and the ability to use identity at all times for various functions will drive” the smart card market, Jekowsky said. “If you asked any financial institution or technology company today if mobile commerce is in its business plan, I would argue the answer would be an unequivocal ‘yes.’ Our business model is, in five years, everyone will have a device that will require some

kind of secure authentication, and that device could be this combination cell phone, PDA and PC.”

While the smart card industry has been promoting the benefits of chip cards, the emergence of a “killer application” for them has been elusive, perhaps hampering widespread distribution in the United States. However, the signing into law of the Electronic Signatures in Global and National Commerce Act (RSC, Oct. 9, 2000, p. 3) last fall that enables digital signatures to stand as legal endorsements on documents will help push smart card usage in North America over the next three years or so, Jekowsky said.

“If you look at the need for a secure, authenticated, nonrepudiable transaction that can work any time, anywhere, anyplace, there is no better device than a smart card to do that,” Jekowsky added. “That has been said for the last eight years, but with the Internet explosion and more importantly, with mobile telephones, PDAs and the desire for a constant online connection for both data and voice, all this is going to drive the smart card market.”

Applications such as e-purse still are important for smart cards, especially for merchants such as casino operators. “There’s nothing wrong with cash, but if a casino can take cash out so it doesn’t have to roll quarters and deposit bills, that’s the benefit for the merchant,” Jekowsky said, adding that reduced expenses could enable them to add loyalty applications to a smart card. “But the real promise of smart cards will be through commerce and the sending of secure information between two parties for the benefit of the card issuer or information issuer, which ultimately will provide a benefit for the consumer.”

Funge Systems seeks to facilitate the secure movement of payments in the digital commerce space, or the transaction of other e-information such as medical records, final exam grades, loyalty points or government benefits. It has designed an Open Transaction Platform (OTP) that third-party developers can license for \$1, which enables them to write smart card applications that are agnostic to the card, card operating system, applications put on it and partners that use it (RSC, Dec. 18, 2000, p. 16).

GETTING IN TOUCH

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During this series of profiles of leaders in the smart card field, Report on Smart Cards asks the same five questions of each interviewee to better compare their predictions-in-brief for the future of the industry.

FOCUS ON...

IRA JEKOWSKY, senior vice president for strategic relationships in North America and chief strategy officer, Funge Systems Inc.

- When do you foresee smart cards widely accepted in the United States?

We'll see them accepted exponentially next year as the money from Y2K is channeled back into the companies' and government's technology leaders. With the need to conduct secure electronic transactions, I think you will see exponential growth in the United States. I've seen predictions that while the United States now is behind, our rate of growth [in smart card acceptance] will exceed anyplace in the world.

- If you had one piece of advice for the smart card industry, what would it be?

I humbly would not offer any advice to the learned people who have spent a lifetime in this business. I would simply say what is common prevailing knowledge of everyone that has been in the smart card business for years. That is, the time for smart cards increases every year; the arguments get stronger every year; and the people who have stayed the course in this business will soon see the fruits of their labor come to fruition. This is not about technology, it's all about business and money and investment, and absent those issues, I'm positive everyone in America and the world would have a smart card because there would be no reason not to, other than the economics behind the rollout.

- What is the largest barrier to smart card acceptance?

The largest barrier is not the lack of an infrastructure, but the reinvention of an infrastructure to the digital world. The old argument was that point-of-sale devices needed to accept smart cards, and until they did, people wouldn't put in smart cards – the old chicken and egg [quandary] – and there was nothing wrong with that argument. That was a valid argument – pre-cyberspace. What I'm suggesting is all bets are off on that argument, and the vision of smart cards penetrating the point-of-sale in the physical world, they will do that.

But my argument is that when you go to the Internet and you need to securely do information movement and financial movement, you have a whole different challenge. Now that the laws in this country and others are recognizing the legality of these electronic contracts and transactions, the solutions for the Internet and especially mobile commerce will drive [the smart card] market, not the point-of-sale acceptance.

- How would you control costs of converting to a cashless society?

I don't believe there ever will be a cashless society. I don't think the smart card will be used at grocery stores or physical points-of-sale tomorrow. I don't believe that in the next 10 years, we'll be in a cashless society. The arguments for smart cards are security, authentication, privacy, nonrepudiation and a lifestyle enhancement of being able to conduct business, transact financial and informational exchanges securely any time, anywhere, anyplace. With mobile phones, [personal digital assistants] and set-top boxes, cards that can be stuck in different devices will improve the quality of our lives and make customers feel better about transactions.

- Who are the hottest players in the smart card arena right now?

The market is so hot now that financial institutions and telephone companies are driving the market as well as third-party providers of solutions that will sit on top of these cards. What we're seeing now is major institutions around the globe are embracing it. That says to me that the whole industry is hot, but mobile commerce is probably the hottest part of smart card business today.

“The operating system and that card and application will work in any cell phone, PDA, personal computer or [automated teller machine], and facilitates developers working in an existing structure to affect and develop applications on the full range of digital technology,” Jekowsky said.

Separating All the Pieces

The OTP solution includes a universal file structure and secure authenticated counter, which organize application placements on the card. “It structures the financial piece, GSM [global system for mobile communications] piece, personal

identification piece and magnetic stripe piece into designated areas so different developers will place this information in the same places so the cards can work interoperably in any terminal that recognizes this OTP," Jekowsky said. "Because we license it for \$1, it's not proprietary. It comes with security provisions that allow for authenticated, secure, nonrepudiable, private transactions between two parties."

The company earns revenues through fees to card issuers based on the card's benefits. "We can offer any vertical segment a total solution to solve their problems," Jekowsky said. "What we've done with our secure authenticated counter and OTP was to set up a model that enables what we believe will be a cost-effective movement of value, monetary or otherwise, in a manner across digital networks today and tomorrow. Our solutions work as well in the wired Internet space as in the mobile space. It's a question of what technology you want to use them on."

Analysts have reported minimal consumer usage of chip applications on major card rollouts by card associations, such as American Express Corp.'s Blue card (RSC, Nov. 13, 2000, p. 1). Jekowsky said his company is looking more toward future usage habits.

"Rather than looking at how American Express, MasterCard and Visa will move their business to cyberspace, our model is based on a white board approach to the solutions today," Jekowsky said. "Our strategy doesn't correct past problems the market had, but we're offering a different business strategy. We're using a different business approach, using the technology used in

the commercial space today and adopting solutions where we believe the market eventually will go – the mobile space. We believe we have a technology and business solution that doesn't carry with it the difficulties of adapting to an infrastructure that wasn't designed for the Internet."

Frictionless Movement

Before coming to Funge last year, Jekowsky worked with MasterCard's commercial product sector. Previously, he helped design the U.S. General Services Administration's (GSA's) SmartPay program (RSC, Sept. 28, 1998, p. 3). The name Funge stems from the Latin "fungor," meaning "to perform in place of." Jekowsky said the idea is to have frictionless movement of commerce through interoperability, with the smart card acting as the "funge device in the phone to allow for frictionless commerce."

Jekowsky anticipates the benefits of Funge System's technology will create a tremendous demand for smart cards for security and authentication. "Our goal is to empower the individual to securely transact with privacy with his partners," he said. "There are a tremendous number of Internet banking companies that will e-money you, such as PayPal. Everyone is looking for a secure way to pay on the Internet and to authenticate transactions. There is tremendous competition in this space, and all the solutions I'm seeing are based on commercial systems available today. We're offering a new model."

Funge Systems has patents in Australia and South Africa, and expects to gain a U.S. dual slot patent for its technology this month.



Ira Jekowsky

Schlumberger to Acquire Bull Smart Cards Activities

In a move that is not particularly shocking to some industry analysts, Schlumberger Ltd. plans to acquire Bull's smart card activities.

In a Jan. 3 release, Bull officials said the company has "granted exclusivity to Schlumberger" to negotiate acquiring Bull Smart Cards & Terminals (Bull CP8). It said the deal was based on Schlumberger's "firm and binding offer ... which was received as a result of an auction process conducted by Bull's investment

bankers." The acquisition still is pending upon the information-consultation process with the workers' councils of Bull, Bull CP8 and Schlumberger in accordance with French rules, as well as upon the successful outcome of the current negotiations.

Theodore Iacobuzio, senior analyst covering cards for Needham, Mass.-based TowerGroup, told RSC that the planned acquisition was not surprising, based on the large number of worldwide smart card suppliers. "It would be rash to say the market was overcrowded, but there are a large number of suppliers when there is not a universal standard," he said.

Because several different European countries have noninteroperable e-purse schemes, and with the U.S. smart card industry “relatively rudimentary,” the market is ripe for consolidation of technology providers, Iacobuzio said. “While there is great potential for smart cards, it’s still in early stages, even in Europe, and one major supplier ceding its business to one that is staking a more serious claim is not very surprising,” he added. “Schlumberger is a huge, multinational corporation and its interest in smart cards is very concentrated.”

Iacobuzio predicts the acquisition could be good news for an “embryonic” U.S. market to narrow down the choices of scheme and software providers. “This points to a rationalization of the market,” he said.

In other Schlumberger matters, Schlumberger Test & Transactions’ smart card manufacturing and personalization center in Mexico City, Mexico, has received Proton World’s certification for the personalization of Proton-based cards, enabling Schlumberger to reinforce its presence in Latin America.

“The Proton World certification is an important milestone in the development of our local service offering and in the advancement of our relationship with Mexican and Latin American businesses,” said Othon Gonzalez, operations manager for Schlumberger Mexico. “Schlumberger continues to demonstrate that it has world-class operation centers and can provide quick delivery of high volumes of smart cards for our customers worldwide.”

The 4-year-old Schlumberger Mexico facility employs 500 people and has produced and

personalized more than 200 million cards for the Mexican and Central American markets. “This achievement confirms our commitment to the Latin American market,” said Alex Moody-Stuart, general manager for Mexico and Central America for Schlumberger. “Schlumberger continues to invest significantly in the region, anticipating our customers’ needs in delivering local solutions in a secure, efficient and cost-effective manner.”

Mike Nash, president of Proton World Americas, added: “Schlumberger investment in this local card personalization center is further proof of the long-term collaboration and synergy between Schlumberger and Proton World. It will greatly aid the national rollout by Inbursa and Telmex of their Proton-based smart card scheme in Mexico, and will make the Proton technology even more attractive to potential Proton licensees in Central and South America.”

Schlumberger: <http://www.slb.com>

VA Issuing Express Card To Veterans in Chicago

The U.S. government has promoted the use of smart cards among its employees in various agencies ranging from the General Services Administration (GSA) to the Department of Defense to the Federal Deposit Insurance Corp. Now, the Department of Veterans Affairs (VA) is taking a bold step to issue multiapplication chip cards to its service population, enabling veterans to securely authenticate their VA benefits and services using digital signatures.

The VA awarded a \$3.6 million smart card contract last month to Maximus Inc. to issue the “VA Express Card” to 200,000 veterans in and around Chicago, Ill., by June 2001. The public key infrastructure (PKI) card initially will contain a veteran’s administrative, clinical and benefits eligibility information, as well as electronic keys that will allow him to digitally sign Internet transactions. VA may add other e-government services later. Because the card carries the veteran’s eligibility records and emergency medical information, it can be used to reduce service waiting times when forms are filed electronically and improve data accuracy.

GSA named Maximus prime contractor for the project under the administration’s Smart

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Access Common ID program (RSC, May 29, 2000, p. 6). The 32 kilobyte Giesecke & Devrient smart card will boost information sharing within each VA administration, including Veterans Health Administration, Veterans Benefits Administration and the National Cemetery Administration.

“We are excited about Maximus’ role helping to achieve the Veterans Affairs vision for improved access and services for our nation’s veteran community,” said David Mastran, chief executive officer of Maximus. “This is the first contract awarded under the new GSA smart card program and sets the standard for other federal government departments and agencies.”

Mike Brooks, director of the center for smart card solutions at GSA, told RSC there was “a correct mix of veterans that use the facilities quite frequently” in the Chicago area. He said GSA has two goals from this contract.

“We hope to learn some of the anomalies of issuing a benefits card to the service population,” Brooks said. “Normally what we’ve done is work with agencies that set up [smart card] applications for their workforce. This is completely different. A government agency for the first time is taking care of its clientele before its workforce, since the workforce doesn’t have the smart card. Secondly, we want to work on the overall coordination between various services of VA. In essence, it’s the ‘train the trainer’ process.”

Brooks praised the card program for its potential to reduce fraud. The card’s main application is authentication to certify that veterans are entitled to the benefits requested. VA now requires a driver’s license or some other picture ID to verify benefits, placing the onus on the VA employee. “This is direct authentication,” Brooks added.

The program will use 3-G International Inc.’s (3GI’s) Passage authentication software and services under a reseller agreement with Maximus. 3GI’s Passage software will provide core authentication and security functions for the smart cards as well as client and server software allowing users to access secure Web sites and digitally sign transactions.

“This award demonstrates 3GI’s leadership position as a technology provider to the U.S. government and as an authentication provider with the capability to secure large enterprises,” said Thomas Gregg, president and chief executive

officer of 3GI. “The VA evaluated other competitive products and chose Passage. We believe our adherence to accepted industry security standards, the credibility we have built with previous government contracts, and the best-of-breed status of Passage helped us earn this opportunity. We are looking forward to working with Maximus and the VA in this new relationship.”

Following this implementation of the VA program, GSA will award contracts through the Common Access program to vendors to provide VA Express cards to some 4 million veterans worldwide. Brooks expects all veterans could have a smart card within two years.

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Maximus: Contact Russ Beliveau.
Phone: +1 800-895-1424. <http://www.maximus.com>

ABA Develops Policy For Digital Certificates

To strengthen its quest to serve as a third-party trust provider in Internet commerce, the banking industry has developed rules governing the use of TrustID digital certificates, which can be stored on smart cards. The American Bankers Association’s (ABA’s) new interoperability policy sets the rules for all parties involved in issuing or receiving TrustID digital certificates, how they will work and how they will be managed.

“This policy paves the way for greater use of digital certificates – that means more trust in online transactions,” said Donald Ogilvie, executive vice president for the ABA. “These rules create a common policy allowing the financial services industry to fulfill its traditional role as a commerce enabler. Banks have a long tradition of trust with their customers. That’s why financial institutions are the best source for issuing digital certificates to their business and retail customers.”

By issuing TrustID certificates, banks can offer more online financial services, build customer relationships and generate new revenue, ABA stated. The technology-neutral rules can encourage the adoption and acceptance of digital certificates among businesses and consumers, it added.

ABA’s partner Digital Signature Trust Co. (DST) is the first certificate authority (CA) to offer

TrustID certificates. Financial institutions certified under the ABA TrustID certificate policy may run or outsource their own certificate authority or use DST.

The policy includes guidance on areas such as liability, identification and authentication, certificate life cycle operational requirements, facility management controls, technical security controls and policy administration. Specific provisions in the TrustID certificate policy include:

- The public key infrastructure (PKI) established by the certificate policy is “open-but-bounded” – the contractual framework establishes limits on the allowed uses and the parties who may be entitled to rely on certificates within the PKI.
- Issuing CAs must meet and maintain minimum insurance coverage of at least US\$10 million and can require that their registration authorities (RAs) provide evidence of insurance or other assurances.
- PKI service providers are not intermediaries of the underlying transactions between parties.
- An issuing CA must undergo a review and approval process to demonstrate compliance with the policy. Issuing CAs and RAs must certify annually that they have been in compliance at all times and note any periods of noncompliance.

Joint Venture for Identrus

In other matters involving digital certificates, VeriSign Inc., iPlanet E-Commerce Solutions and

smart card giant Gemplus SA plan to develop a complete e-commerce solution for Identrus participants. The companies also said Canadian Imperial Bank of Commerce (CIBC) will adopt the integrated solution, which will provide financial institutions with an Identrus-enabled technology platform that helps them operate as trusted third parties for issuing digital certificates to their corporate customers.

“We are pleased to be the first to adopt this exciting initiative, which is another step in our ongoing effort to work with industry leaders to offer our corporate customers a secure global framework to verify the identity of their trading partners around the world,” said Susan Frostad, general manager of the Identrus project team for electronic commerce at CIBC.

“By leveraging this integrated solution, we are now able to use this e-commerce security infrastructure to certify our corporate customers as trusted trading partners on the Internet. Once certified, these trading partners can conclusively identify one another online, ensure their communications are secure and compile an indisputable record of commercial activities,” Frostad continued.

Leading financial institutions formed Identrus to enable banks to leverage their position as the traditional agents for commercial collaboration to add a legal and business framework to traditional PKI. VeriSign, iPlanet and Gemplus will provide financial institutions with certificate-based services and software that meet with the Identrus specifications, designed to enable them to deploy an Identrus infrastructure quickly and cost-effectively.

“Under the Identrus program, financial institutions are the ideal providers of identification and identity risk management in the virtual world, as they have the experience and the infrastructure needed to facilitate trusted e-commerce,” said Kristin Kupres, chief operating officer of Identrus. “We’re pleased that leading technology providers such as VeriSign, iPlanet and Gemplus, are teaming up to provide a fast, easy and affordable way for financial institutions to quickly deploy Identrus applications and infrastructure.”

Under a test drive program for the Identrus system, financial institutions can quickly and easily try out an Identrus infrastructure without implementing complex solutions in their test labs. The program will enable them to evaluate solutions, including VeriSign’s Identrus Global ID

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crypto-secured digital identities; smart card-based digital signatures, processed by Gemplus' GemSAFE IS Workstation technology, which includes PKI smart cards storing user private keys and Identrus Global IDs, smart card readers and signing interface software; and Identrus certificate status check, processed by the iPlanet Trustbase transaction manager, which provides the implementation of the Identrus transaction coordinator.

"As much as businesses rely on Identrus participants to provide them with the high level of trust necessary for secure e-commerce to happen, financial institutions rely on companies like us to help them simplify their PKI infrastructure deployment process and ongoing operations," said Mary Anderson, vice president of enterprise marketing for VeriSign.

"By providing financial institutions with a fast and easy way to deploy their integrated technology platform based on Identrus systems, financial institutions will now be able to support their customers to securely move critical business processes on the Internet and engage in trusted Internet commerce," Anderson added.

Pact with Grant Thornton

In addition, VeriSign also has signed an agreement with accounting and tax consulting firm Grant Thornton LLP to offer managed digital certificate services to Grant Thornton's extensive base of financial services clients. Adding Grant Thornton as a CA operating under VeriSign's global trust network will enable banks, brokerages and insurance companies to leverage a highly scalable infrastructure for the issuance of digital certificates to both corporate and consumer customers.

Grant Thornton will assist financial institutions with practices and policies in creating digital certificate hierarchies and using digital certificates and digital signatures in an e-commerce environment. Grant Thornton clients also may benefit from issuing digital certificates under the VeriSign global trust network of interoperable digital certificates.

"Both businesses and consumers can enhance the efficiencies of the Internet and electronic commerce by using digital signatures provided by their banks," said Chris Leach, national director of e-risk services at Grant Thornton. "By teaming with VeriSign, we can now offer banks and other financial institutions the highest level of

confidence and assurance in making digital signatures available to their customers."

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VeriSign: Contact Muriel Jaouich. Phone: +1 650-429-3546. <http://www.verisign.com>

SIMalliance Group Adds Bull, Graphium Danmark

Two more companies – Bull and Graphium Danmark A-S – have joined the SIMalliance, a collaboration of seven firms seeking to standardize mobile Internet access using existing subscriber identity module (SIM) technology for global system for mobile communications (GSM) phones and Phase 2+ handsets.

"Working with the SIMalliance, we will be able to personalize our service offer for the needs of our customers, with better vision on the future of this complex and fast-growing market," said Julien Zuccarelli, vice president of mobile telephony marketing and sales for Bull.

Added Thomas Knudsson, vice president for GSM at Graphium Danmark: "It is in the operators' and end-users' best interests that the industry works together in defining the new standards and a platform on which we will build our new products and services. Graphium welcomes the opportunity to join SIMalliance and looks forward to working together with the other members to help improve and develop the standards of future SIM cards."

By developing interoperable SIM card technologies, these companies can help mobile operators lower their development costs and increase subscriber uptake of mobile services on existing phase 2+ phones. The SIMalliance seeks to ensure that the SIMalliance Toolbox (S@T) becomes a de facto browsing standard. The SIMalliance also is addressing other issues such as interoperability, public key infrastructure (PKI) security, general packet radio service (GPRS) and bearer independent protocol technology.

"SIMalliance welcomes membership applications from all key industry players," said Vincent Biraud, chairman of the SIMalliance. "The admission of new members Bull and Graphium Danmark means that we are able to pool increased

resources and industry expertise for new developments in SIM-based technologies.”

In another wireless matter, Asian SIM card provider I'M Technologies Pte. Ltd. and Bull Smart Cards & Terminals have signed an agreement to promote Bull's Java-based SIM Cards to mobile operators in Asia.

“With this agreement with I'M technologies, a leading supplier to mobile operators, Bull enriches its network of partners,” said Philippe Cambriel, president of marketing and sales for Bull Smart Cards & Terminals. “This agreement will enable us to provide high value-add SIM cards and end-to-end quality services to Asian customers.”

Bull can provide both 32 kilobyte (K) Java SIM cards and 64K cards. “With this licensing of Java platform, I'M Technologies completes its SIM cards product line from Phase 2+ SIM to the latest technology of Java SIM cards,” said Ip Chi Shing, director of I'M Technologies' Hong Kong office. “With the availability of the Java system, I'M will concentrate in the development of applications and the personalization of the cards for our customers.”

EMV Goes Mobile

In addition, Europay International, which previously had granted Europay/MasterCard/Visa (EMV)-payment card certification only for automated cash machines and point-of-sale terminals, now is offering certification for mobile phones and interactive digital TV. Europay has granted EMV Level 1 certification for dual-slot mobile phones from Motorola Inc. and Sagem SA, along with digital TV set-top boxes from Pace Micro Technology PLC, Philips Electronics NV, Pioneer Electronic Corp. and Sony Corp.

“This move clearly demonstrates confidence in EMV chip beyond the physical world,” said Pascal Dufour, senior manager of new products introduction at Europay International. “Over the next two years, we predict a significant increase in the use of EMV chip technology to secure payments over the Internet and mobile channels, thereby facilitating the acceptance of Europay brands on additional channels.”

Wireless products now are being developed to enable secure transactions over mobile networks for the latest generation of dual-slot mobile phones from Motorola and Sagem. French global

television operator, Canal+, also is adopting the new secure acceptance channel and is preparing to introduce the EMV standard in France this year.

“We are delighted to announce the first EMV specification for a tri-band, WAP [wireless application protocol]-enabled phone,” said Ed Sadowski, general manager of the personal networks group of Motorola Europe, Middle East, Africa (EMEA). “We see this certification as a key part of Motorola's commitment to standardize mobile commerce. The introduction of this new service turns the mobile phone into a highly secure mobile Internet access and payment device.”

SIMalliance: Contact Vincent Biraud. Phone: +33 0 147-465-758. <http://www.simalliance.com>

Bull Smart Cards & Terminals:
<http://www.bull.com>

Europay: Contact Charlotte O'Connor.
Phone: +32 2-352-5647. <http://www.europay.com>

Proton Expands Services In America, Eastern Europe

Proton World is beefing up its global smart card services after signing new licensees in Eastern Europe and opening an office to expand programs in the Americas.

Riga, Latvia-based smart card firm Netcards this month became the Proton licensee in Estonia, Latvia and Lithuania. In 1999, Netcards teamed with Latvian bank Unibanka to develop an access control system using smart cards for cars in the Old Town district of Riga.

“The Proton technology offers us excellent opportunities to further develop our projects and to deliver to our customers the best solutions for advanced payment systems based on smart card technology,” said Aris Meilands, director of Netcards.

Added Armand Linkens, chief executive officer of Proton World: “I am delighted to welcome Netcards to the worldwide family of Proton licensees and look forward to the development of its projects in this key region that is undergoing massive economic restructuring and political realignment. The multiple-application capacity of the Proton technology means that the range of applications that Netcards can offer can grow in

HOUSE LEADERS TO NAME CHAIRS OF REVAMPED COMMITTEES

House GOP leaders were expected to release their selections for committee chairmen at RSC 's deadline, and there's speculation that most of, if not all, the subcommittee leaders also would be determined by the weekend.

Rep. W.J. "Billy" Tauzin (R-LA), former chairman of the House Commerce telecommunications, trade, and consumer protection subcommittee, was expected to be tapped to lead the revamped Energy and Commerce Committee, while former telecommunications subcommittee vice chairman Rep. Michael Oxley (R-OH), who headed the panel's finance and hazardous materials subcommittee, is considered a lock for the new Banking and Financial Services Committee.

The House voted Jan. 3 to approve a rules package carving out the financial services jurisdiction of the Commerce Committee and folding it into the Banking and Financial Services Committee.

As the two most senior Republican members of the Commerce Committee, Tauzin and Oxley had been pressing their cases before House leaders, fellow lawmakers and a Republican Steering Committee that's overseeing selection of committee leaders.

A Republican aide whose boss supported Oxley's bid said the committee restructuring "makes ultimate policy sense." In reformatting the financial services panel, House leadership saw Oxley as "someone who understands the international nature of the financial world, as well as the technological aspects of" it, the aide said.

Rep. Cliff Stearns (R-FL) was third among Republicans in seniority on the telecommunications panel last year, behind Tauzin and Oxley. On the full Commerce Committee, he ranked behind six Republicans: then-chairman Thomas Bliley Jr. (VA), who retired, and Reps. Tauzin, Oxley, Michael Bilirakis (FL), Joe Barton (TX) and Fred Upton (MI).

Because they have the edge in seniority over Stearns, Bilirakis, Barton or Upton probably could wind up with the telecommunications subcommittee gavel if any of them wanted it, congressional observers told RSC. But so far, the three haven't shown a keen interest in the job, and all three seem to have their sights on other panels.

A spokeswoman for Bilirakis, who was chairman of the Commerce Committee's health and environment subcommittee, said he was seeking to be the next chairman of the Veterans Affairs Committee. An Upton spokesman told RSC that the Michigan Republican was "very interested" in becoming chairman of the health subcommittee, if Bilirakis leaves that panel to take the helm at Veterans Affairs. In addition, several House sources told RSC they doubt Barton would exchange his gavel at the energy and power subcommittee for a chance to lead the telecommunications panel.

Many telecommunications observers believe Stearns wants the chairmanship of the telecommunications subcommittee, and that a Stearns-led subcommittee likely would get the ball rolling on Federal Communications Commission reform, spectrum management and Internet privacy.

line with the expectations and aspirations of its customers."

In Bulgaria, Borica, the Bulgarian national payment card network operator, has signed a binding agreement to become the Proton licensee for that country. Created in 1993 by the Bulgarian National Bank to develop and install a national network of automated teller machines (ATMs) and point-of-sale (POS) terminals for credit and debit card transactions and settlement, Borica now processes domestic and international payment card transactions on behalf of 25 different Bulgarian banks.

Borica plans to launch three Proton World-managed pilots this year, initially creating a Bulgarian e-purse smart card using Proton's existing R3 technology. It later will advance to Proton's new generation R4 technology to provide secure access, public key infrastructure (PKI)-based digital signatures and secure e-commerce and mobile commerce (m-commerce). In a third pilot, it will test the R4 domestic e-purse, interoperable common electronic purse specification (CEPS)-based e-purse and Europay/MasterCard/Visa (EMV) credit/debit applications to prepare for migrating Bulgaria's existing magnetic-stripe payment cards to R4 Proton smart cards.

“I am delighted to welcome Borica to the Proton World family, especially as it has chosen to be an early adopter of our new R4 technology,” Proton World’s Linkens said. “I am sure that the wide range of attractive services offered by R4 will answer the future needs of the Bulgarian banks and their customers.”

More than 550,000 payment cards have been issued in Bulgaria and the number of electronic payment transactions in 2000 was more than double the 1999 total.

“This license agreement with Proton World is a boost for e-payments and a strategic step toward the issuance of electronic money and the use of e-cash in Bulgaria,” said Alexander Matrozov, chief executive officer of Borica. “It heralds the arrival there of the e-purse and will ensure a smooth migration to CEPS and EMV-compliant smart cards. It will also allow Borica to lead the market in the introduction of PKI-based smart cards for secure e- and m-commerce, digital signatures and access control. We chose the Proton technology because of its unrivalled security record, because it offers CEPS and EMV compliance, and because it offers full auditability and traceability at no extra operating cost.”

Coming to America

Across the globe, Proton has established Proton World Americas, a new division located in Redwood City, Calif., which will be the base for expanding Proton’s activities in the smart card markets of North, Central and South America. It also has appointed Mike Nash president of Proton World Americas.

The company’s American strategy seeks to support existing Proton licensees in Mexico and the United States by expanding their programs and encourage new licensees in Canada and Latin America. It also will continue to host “road shows” in the United States to tout smart card benefits.

“The time has finally come when the commitment to smart cards in the United States is clear,” Nash said. “The recent successful launches of smart card-based products by market leaders in the banking and financial sectors have created significant interest in smart cards. The U.S. government’s interest is well-known, and represents a potentially enormous market segment.”

Nash also praised the Canadian and Mexican smart card markets. “Canada is already a world leader in smart card programs, and we believe that Proton World’s new products will make a major contribution to the efforts that are already under way to provide an open infrastructure for smart cards there,” he said. “In Mexico, our licensees have recently started the rollout of a highly innovative smart card-based line of products, which began with the conversion of a network of 300,000 public pay phones to smart cards. We will support their plans for further developments and geographic expansion.”

Proton World will put together end-to-end solutions both by supplying or building components and by buying and integrating components from third-party manufacturers. The company will work with current partners to provide solutions that will support all major smart card applications. Through arrangements with its partners, Proton World also supports a secure platform for the dynamic downloading of new applications onto cards after their issue to end-users.

“The arrival of Mike Nash and the opening of an office in America will be of enormous help to us as we enter the second phase of developing the American markets for smart cards by fully exploiting the interest the road shows created and confirmed for us,” Linkens said. “It also confirms Proton World as a truly global company offering unrivalled end-to-end smart card solutions.”

Proton World: Contact Dominique Hautain.
Phone: +32 2 724-5111. <http://www.protonworld.com>

Firms Tout Portability, Security of New Readers

Several companies are developing enhanced portable smart card readers to ensure the security of online transactions and data storage. Public key infrastructure (PKI) systems provider Spyrus has released its Rosetta personal access reader (PAR 2) – a compact, portable smart card reader that can be reprogrammed for personal computers (PCs) or laptops.

Rosetta PAR 2’s thin form-factor design, and its simple keypad and display, allows for easy access of stand-alone applications such as e-purse management, account balance inquiry, medical and other personal information storage, and

loyalty programs. The reader also supports secure personal identification number (PIN) entry for PKI-ready applications, such as secure e-mail, browsing, file security, access control and digital authentication.

“Rosetta PAR 2 leverages the extensive smart card experience of Spyrus to become the next generation of smart card reader,” said Sue Pontius, president and chief executive officer of Spyrus. “Not only does Rosetta PAR 2 provide a critical component for end-user security solutions for stand-alone and PKI functions, it offers a secure, reliable development platform for smart card applications. For the first time, third-party developers can customize an application on a reader without having to develop the whole product in-house, thus saving significant development costs.”

Because it can be reprogrammed, the Rosetta PAR 2 reader enables companies to customize applications. Spyrus officials said it especially could be useful for the health care market, where protecting patient information is critical, and the financial services industry, where establishing access control is vital.

Rosetta PAR 2 is available separately, or as part of the Rosetta executive suite – a complete, portable smart card system bundle that also includes the Rosetta smart card and software allowing secure e-mail and Web browsing capability.

In another smart card reader matter, European financial institution Rabobank has ordered 300,000 Vasco Digipass 800 hand-held strong authentication and digital signature devices. Rabobank plans to enable 6 million e-purse smart card holders to conduct secure Internet and PC banking using the readers.

Because the Digipass 800 greatly extends the capabilities of a smart card with strong security and portability, Vasco also is partnering with leading smart card developers and issuers such as Proton World. Vasco and Proton World are marketing a Proton-compatible version of the Digipass 800 to the organization’s worldwide base of e-purse smart cards.

“The Digipass 800 will allow any of our 6 million customers using personalized Rabobank e-purse smart cards to use their cards to conduct secure remote banking,” said Bert Willems of Rabobank. “It thus enables us to introduce and promote additional banking services to any of our

smart card holders who receive a Digipass 800, so we will be marketing the Digipass 800 to our entire smart card installed base. And because the Digipass 800 uses the information stored on the Rabobank smart card to personalize the device, we can standardize our entire infrastructure around smart cards as the primary means of establishing a unique electronic identity with our customers – saving us time, effort and money and making life even easier for our customers.”

Because it is a member of the Digipass family of products, the Digipass 800 can be installed with any existing Digipass customer with no changes to its existing systems. “We welcome Rabobank as the first bank to recognize the tremendous business benefits that the Digipass 800 holds,” said Jan Valcke, executive vice president of sales and marketing for Vasco.

“We expect other banks around the world, both from our customer base of more than 150 banks as well as new customers, to select the Digipass 800 as an easy and cost-effective way to leverage their installed bases of smart cards to promote additional banking services to their existing and future customers,” Valcke added.

Making Sense Online

In addition, Sense Technologies Inc. is making its second generation of biometric secured access control and time and attendance devices available online. These devices include a smaller form factor wall unit with an integrated smart card reader/writer, a new CheckPrint desktop unit and a new CheckPrint desktop unit with an integrated smart card reader/writer.

“We exhibit at several trade shows a year, but you only get in front of a limited amount of prospective customers,” said Dore Perler, chief executive officer and co-founder of Sense Technologies. “Sense products generate extraordinary interest at the shows, and we’re confident this will escalate online. In the past, customers, interested parties and investors would have to wait for a local trade show to see our latest technology. Now we’re bringing our investment in research and development to them by way of their Internet connections.”

Spyrus: <http://www.spyrus.com>

Vasco: <http://www.vasco.com>

Sense Technologies: <http://www.senseme.com>

Items of Interest

- The first phase of a Canadian law to protect data privacy took effect Jan. 1 for most private-sector entities. It requires organizations to obtain an individual's consent to "collect, use or disclose the individual's personal information" during commercial activities, according to a compliance guide published by the privacy commissioner of Canada. The Personal Information Protection and Electronic Documents Act provides individuals access to such information to ensure its accuracy. The law authorizes a federal privacy commissioner to audit company personal information practices "when he believes the organization is not fulfilling its obligations" under the act. It also allows complainants to seek federal court remedies for alleged privacy violations.

- The International Card Manufacturers Association's (ICMA's) second annual card manufacturing global market survey found that chip cards represent 18.3 percent of all cards manufactured (7.9 billion total units worldwide), and 76.8 percent of the US\$4.5 billion global market value of card manufacturing. The North American card market – valued at US\$529.2 million – moved from second position in the first survey to fourth position due to lagging chip card growth. The European market, valued at US\$2.153 billion, ranked first, driven by a mature chip-card market. Asia Pacific ranked second at US\$1.119 billion and Latin America ranked third at US\$686.5 million. "Clearly this survey represents a major global trend in chip card growth except in North America," said Jeffery Bernhart, founder and executive director of ICMA. "While growth is occurring in some large-scale, closed system applications, the well-established North American infrastructure at point-of-sale precludes large-scale acceptance of financial chip cards for the time being." ICMA: <http://www.icma.com>

- QI Technologies Corp. has signed a letter of intent to form a strategic alliance with Telus Communications Inc. to develop smart card systems and applications. "An alliance between Telus and QI Technologies will clearly benefit customers of both companies," said Tom Forbes, director of smart cards for Telus. "QI's technical expertise in designing and developing

smart card payment terminals and its proven capabilities for integrating Telus smart cards and QI smart card readers will enable both organizations to develop and deploy world-class smart card applications to the customers and markets that they serve." QI Technologies, contact James Roberts, +1 604-264-9930. <http://www.qitech.com>

- B&I Corp. Ltd. is using the MULTOS multiapplication smart card operating system to develop a secure Internet-based voting system. Under the system, registered voters would be issued a personal voting card that can be used on the Internet. A voting card reader connected to a personal computer allows the voter to make his selections securely. "Maintaining security across the Internet is becoming a major obstacle for the introduction of new and exciting services such as voting," said Steve Everhard, marketing and commercial director of MAOSCO, the organization promoting MULTOS. "As the most secure smart card technology available, MULTOS provides a unique assurance to users. The VOM [Voting on MULTOS] System would give us an American president in hours rather than weeks." MULTOS: <http://www.multos.com>

- Datacard Group has expanded its software development center in Bangalore, India, to increase its production of multiapplication smart card products and digital identity solutions. "Smart cards and identity systems are the fastest growing and most promising portions of our portfolio," said Jerry Johnson, president and chief executive officer of Datacard. "Demand for these solutions is growing even faster than we had hoped, which means software development capacity is critical for us. This operation in Bangalore will satisfy much of that interest." Datacard, contact Darlene Swan, +1 952-988-1912. <http://www.datacard.com>

- eConnect has signed a letter of intent with Huaxia Bank in Shanghai, China, and Rieys Company Ltd. to implement eConnect's Bank Eyes Only technology platform for the developing online retail industry in China. Huaxia will fund Rieys US\$3.5 million to upgrade facilities to produce and develop up to 600,000 eCashPads, which use smart cards,

during the next two years. "This introduction, eConnect's largest and most ambitious to date, is consistent with our global strategy not only for secure Internet commerce, but for cash online payments," said Thomas Hughes, founder, chairman and chief executive officer of eConnect. "This is a priority in many world markets that are eager to embrace e-commerce, but whose culture of consumer credit has not evolved along lines taken for granted in much of the Western world." eConnect: <http://www.econnectholdings.com>

- Elva Inc. has developed the VocaliD smart card and will begin mass producing it this year. VocaliD is a standard format card that meets magnetic-stripe-based payment and loyalty requirements, while being compliant with major traditional chip-based smart card technologies. Elva: <http://www.elva.fr>

- Qwest Communications International Inc. has signed a three-year, US\$32 million contract with mysmart.com in which mysmart.com will offer Internet services using its mysmart mouse pad system, which incorporates smart cards. As part of the agreement,

mysmart.com customers can purchase Qwest long distance services on a button on the mysmart.com mouse pad. "We are delighted to have this strategic alliance with Qwest," said Jim DeRose, president and chief executive officer of mysmart.com. "By providing optional low-cost, high-quality Internet access in conjunction with our mysmart mouse pad system, our customers have a valuable resource and can now enjoy all that the Web has to offer easily and affordably." mysmart.com: <http://www.mysmart.com>

- IFS International Inc. and e-commerce payment-processing firm Go2Pay.com have entered into a funding partnership with Empire State Development. "Some industry analysts estimate that only 20 percent of all Web sites are able to conduct e-commerce today," said Frank Pascuito, chairman and chief executive officer of Go2Pay.com. "With our real-time payment processing capabilities and the ability to process and reload smart cards over the Internet, Go2Pay is uniquely qualified to provide uninterrupted service to merchants who are already feeling the effects of these two explosive market trends." IFS International: <http://www.ifsintl.com>

TRANSIT, from p. 2

more retailers or expand to the rest of the regional rail network.

"I congratulate all who were involved in this remarkable project, which proves that Proton World can respond to the needs of customers who are working to very short deadlines," Graham Frost, deputy chief executive officer and executive vice president of sales and services at Proton World said, referring to the 11-week development of the program.

"Our worldwide experience in project management and implementation is second to none, and we will continue to exploit our expertise by offering end-to-end global smart card solutions," Frost added.

Improving Transit in Maryland

In the United States, Maryland Gov. Parris Glendening (D) has launched a six-year, US\$750 million transit program that includes implementing smart cards and other cutting-edge

technology, and simplifying the base transit fare structure around the state.

"Maryland and the region are in the midst of dynamic, positive change," Glendening said. "This transit package is designed to provide connections to where people need to go today, not where they needed to go 20 or 30 years ago. Our goal must be to make mass transit not just an option – but the preferred transportation option – for commuters, shoppers and other travelers."

The state will spend US\$50 million to install smart card fare technology on transit systems around the state, enabling customers to travel on any system, using one prepaid fare card.

It also will spend US\$53 million to implement customer service enhancements, including real-time schedule information at transit stations, "talking buses" that automatically announce the next stop to passengers, and Internet and other enhancements to assist customers with trip-planning information.

To fund the program, Maryland will collect US\$360 million by redirecting an additional 1 cent of Maryland's corporate income tax to the transportation trust fund (TTF); will generate US\$132 million by dedicating 100 percent of the sales tax on rental cars to the TTF; and will make available US\$258 million as the Maryland Transportation Authority expands its investment in transportation facilities.

The program "will allow Maryland to continue to lead the nation in smart growth investment, which is very appealing to business leaders across the country," said Maryland Lt. Gov. Kathleen Kennedy Townsend (D). "In an age when companies can do business from anywhere in the world, they're locating in the best places to live and work. With this initiative, we're envisioning a 21st century transportation system for Maryland's new economy."

Also in Maryland, Lockheed Martin IMS will expand the state's M-TAG electronic toll collection (ETC) program to other state toll facilities and enable those who participate in M-TAG and E-ZPass programs to access each system's facilities.

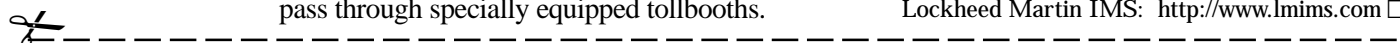
The Maryland Board of Public Works has approved a \$24 million program expansion of M-TAG services. ETC systems such as M-TAG and E-ZPass enable drivers to establish prepaid accounts and mount electronic transponders on the insides of their vehicles' windshields. The devices are read automatically when the vehicles pass through specially equipped tollbooths.

Under the agreement, IMS also will expand the M-TAG service options to include casual drivers and commercial vehicle discount plans based on volume. M-TAG now is available only to drivers enrolled in commuter plans that offer discounted tolls but require minimum usage of the system within set time frames. Expanded service will enable drivers to establish M-TAG accounts without time restrictions.

The contract addition also authorizes IMS to provide software that equips M-TAG participants with account reciprocity when driving on toll bridges, tunnels and highways that use the E-ZPass ETC system. M-TAG drivers who use E-ZPass facilities in New York, New Jersey, Pennsylvania, Massachusetts, Delaware and West Virginia will have tolls automatically deducted as if they were using Maryland toll facilities.

IMS expects to make E-ZPass reciprocity and expanded M-TAG availability operational by the end of 2001. "We commend the state of Maryland for its vision in extending M-TAG to thousands of drivers within the state, while providing an essential link in a virtual non-stop chain of electronic toll collection convenience extending up and down the East Coast," said John Brophy, president and chief executive officer of IMS.

Motorola: <http://www.motorola.com/smartcard>
 Proton World: Contact Mike Nash. Phone: +1 650-802-9900. <http://www.protonworld.com>
 Maryland Office of the Governor: <http://www.gov.state.md/gov>
 Lockheed Martin IMS: <http://www.lmims.com>



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